

# විමර්ශා

සම-විමර්ශිත අර්ධ වාර්ෂික විද්‍යුත් ශාස්ත්‍රීය සංග්‍රහය

පළමු වෙළුම

තෙවන කලාපය



මෞලික සිද්ධාන්ත හා ශරීර විද්‍යුත අධ්‍යයනාංශයේ ප්‍රකාශනයකි

දේශීය වෛද්‍ය පීඨය

කොළඹ විශ්වවිද්‍යාලය

# විමර්ශ

සම-විමර්ශන අර්ධ වාර්ෂික විද්‍යුත් ශාස්ත්‍රීය සංග්‍රහය

පළමු වෙළුම

තෙවන කලාපය

මොලික සිද්ධාන්ත හා ගරීර විද්‍යුත අධ්‍යයනාංශයේ ප්‍රකාශනයකි

දේශීය වෛද්‍ය පීඨය

කොළඹ විශ්වවිද්‍යාලය

2023 දෙසැම්බර්

මෙහි අන්තර්ගත සියලු ම ලිපිවල අයිතිය සහ වගකීම ඒ ඒ ලේඛකයා සතු ය.

## විමර්ශා

සම-විමර්ශන අර්ධ වාර්ෂික විද්‍යුත් ශාස්ත්‍රීය සංග්‍රහය  
පළමු වෙළුම  
තෙවන කලාපය

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සංස්කාරක මණ්ඩලය

ආචාර්ය පී. කේ. වැන්දරච්චිනා (ප්‍රධාන සංස්කාරක)  
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සහය මහාචාර්ය එස්. පී. මොල්ලිගොඩ  
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ආචාර්ය එම්. ඩබ්. එස්. ජේ. කුමාරි  
වෛද්‍ය එම්. ආර්. එම්. වික්‍රමසිංහ

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මෞලික සිද්ධාන්ත හා ශරීර විඥාන අධ්‍යයනාංශය  
දේශීය වෛද්‍ය පීඨය  
කොළඹ විශ්වවිද්‍යාලය

# VIMARŚĀ

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## **GREETINGS FROM DEAN**

I am glad that the Faculty of Indigenous Medicine is engaged in various academic and research endeavors to upgrade the evidence-based research culture of the interested stakeholders via different platforms. 'Vimarśā' is a bi-annual, peer-reviewed, and E-journal published by the Department of Basic Principles, Ayurveda Anatomy and Physiology, Faculty of Indigenous Medicine, University of Colombo. It accepts original research and concept papers on all areas related to Ayurveda from the academics of the Faculty of Indigenous Medicine and other relevant Institutions.

While addressing the pertinent issues on all forms of Ayurveda and related disciplines I am sure 'Vimarśā' E-journal would create a good platform for critical debates on the basis of traditional medicine concepts and their own place in the academic realm. I congratulate the editorial team and the relevant contributors' efforts in bringing awareness of Ayurveda and related research concepts through new issues to the stakeholders of educational institutions and various relevant organizations at large. Further, I encourage researchers to join this E-journal by sending their novel research papers with multidisciplinary research approaches.

Thank you

Prof. Pathirage Kamal Perera

Dean, Faculty of Indigenous Medicine, University of Colombo

### අංශාධිපතිගේ සුඛාශීංසනය

කොළඹ විශ්වවිද්‍යාලයේ දේශීය වෛද්‍ය පීඨයේ මෞලික සිද්ධාන්ත හා ශරීර විඥාන අධ්‍යයන අංශය මගින් ප්‍රකාශයට පත් කරනු ලබන විමර්ශා ශාස්ත්‍රීය සඟරාව සම්බන්ධයෙන් සටහනක් නැබීමට ලැබීම වටිනා අවස්ථාවක් ලෙස සලකමි. මෙම සඟරාව මෙතෙක් වාර්ෂික කලාපයක් ලෙස ප්‍රකාශයට පත් කළ මුත් 2023 වසරේ සිට වර්ෂයකට කලාප 2 ක් වශයෙන් එළිදැක්වීමට දෙපාර්තමේන්තුව මගින් ගන්නා ලද තීරණය ප්‍රශංසනීය වේ.

ආයුර්වේද සිද්ධාන්ත පාදක කොට ගෙන සම්පාදන යකරන ලද ශාස්ත්‍රීය පර්යේෂණ ලිපි සඳහා ප්‍රමුඛ ස්ථානයක් ලබා දීමට කටයුතු කිරීම මෙහි සුවිශේෂත්වයකි. ආයුර්වේද සිද්ධාන්තවලට අදාළව ශාස්ත්‍රීය පර්යේෂණවල නියැලෙන සියලු ම පර්යේෂකයන්ට මෙය මහඟු අවස්ථාවක් වන අතර විශ්වවිද්‍යාලයීය නවක පර්යේෂක විද්‍යාර්ථීන්ට ද මෙමගින් තම පර්යේෂණ ඉදිරිපත් කර ගැනීමට ද්වාර විවර වනු ඇත.

වර්තමානයේ පවතින ආර්ථික දුෂ්කරතා තත්ත්වය මත මෙම සඟරාව විද්‍යුත් පර්යේෂණ සඟරාවක් ලෙස පවත්වාගෙන යාමට කටයුතු කිරීමට අධ්‍යයනාශය තීරණය කිරීම කාලෝචිත ය. විශ්වවිද්‍යාල ආචාර්යවරුන්ගේ ශිෂ්‍ය ප්‍රජාවගේ අධ්‍යයන හා ශාස්ත්‍රීය කටයුතු ඉහළ නැංවීමට මෙම සඟරාව දායක වනු නො අනුමාන ය. එමෙන් ම පර්යේෂණ හා අධ්‍යයන ක්ෂේත්‍රය පුළුල් කරමින් ජාතික හා ජාත්‍යන්තර වශයෙන් දැනුම බෙදාහැරීමේ වගකීමට දායකත්වය සැපයීම ද මෙමගින් සිදු වේ. එබැවින් මෙම සඟරාවට සිංහල හා ඉංග්‍රීසි බසින් ලිපි සැපයීමට අවස්ථාව සලසා දීම ද වඩාත් ඵලදායී වේ. මෙම ශාස්ත්‍රීය කථනව්‍යය සාර්ථක කර ගැනීමට සහයෝගය දැක් වූ පීඨාධිපති මහාචාර්ය කමල් පෙරේරාටත් කථනා මණ්ඩලයටත් හන් අයුරින් ශ්‍රමය කැප කළ අනෙකුත් සියලු දෙනාටත් මාගේ කෘතඥතා පූර්වක ස්තූතිය පුද කර සිටිමි. මෙම ශාස්ත්‍රීය සඟරාව ඉදිරියට සාර්ථකව කරගෙන යාමට මාගේ සුඛාශීංසනය එක් කරමි.

සහය මහාචාර්ය එස්. පී. මොල්ලිගොඩ

අංශාධිපති

මෞලික සිද්ධාන්ත හා ශරීර විඥාන අධ්‍යයන අංශය

කොළඹ විශ්වවිද්‍යාලය

## සංස්කාරක සටහන

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ඒ. එම්. එන්. ඩී. සෙනවිරත්න

### සාරාංශය

භාරතය වනාහි අනේකවිධ ආගමික ඉගැන්වීම් හා පෙරදිග බෞහෝ දර්ශනයන්ගේ වැදුම්ගෙය සනිටුහන් කළ දේශයයි. පුරාණ සෘග් වෛදික යුගයේ පටන් අනුක්‍රමයෙන් ගැඹුරු හා පළලින් වර්ධනය වූ පෙරදිග දාර්ශනික පසුබිම බුද්ධ කාලය වන විට පරිණත මට්ටමක පැවති බවට සාධක වේ. වේද යුගයේ බ්‍රාහ්මණ, ආරණ්‍යක, උපනිෂද් යුගයන් අනුක්‍රමයෙන් පසු කර යන මිනිසා උසස් දාර්ශනික මතයන්ගේ තර්කානුකූල බව කෙරෙහි වැඩි නැඹුරුවක් දැක්වූ බවට සිතිය හැක. එම නිසාම ශ්‍රමණ, බ්‍රාහ්මණ, ජටිල, ආජිවක, පරිබ්‍රාජක, නිගණ්ඨ ආදී ශාස්තෘවරුන් අතර හා ඔවුන්ගේ පිරිස් අතර වූ වාද විවාද, තර්කයන්ගේද අඩුවක් නොවිණ. එය භාරතය තුළ උසස් දාර්ශනික ආකල්පයන් පෝෂණය විමට මහත් සේ බලපෑවේය. ආයුර්වේදය ද අඵර්වවේදයේ උප වේදයක් ලෙස සලකයි. එබැවින් ආයුර්වේදයෙහි වූ දාර්ශනික පසුබිම ලාංකිකයන්ට සමීප බෞද්ධ දර්ශනය සමඟ සංසන්දනාත්මකව විග්‍රහයක් සෙවීම වටිනේය. බෞද්ධ දර්ශනයේ හා ආයුර්වේදයේ වූ මූලික අරමුණු, එම අරමුණු වෙත ළඟා වීමට ඇති මාර්ගයන්, චතුර් භුත, පංච භුත සංකල්පය, කර්ම සංකල්පය, මනස, ආත්මය, ධාතු, වේදනාව හා ව්‍යාධි ආදී වූ මූලික සංකල්ප මත සංසන්දනයක් මෙහිදී එම නිසාම සිදුවේ.

**මූල පද :** දර්ශනය, ආයුර්වේදය, බෞද්ධ, රෝග

### හැඳින්වීම

ක්‍රි.පූ 6 වන සියවස වනාහි අනේකවිධ දාර්ශනික චින්තාවන්ගෙන් පිරි පැවති කාලවකවානුවක් බව පාලි සූත්‍ර මොනවට පෙන්වාදෙයි. බ්‍රාහ්මජාල සූත්‍රයෙහි සමකාලීන දාර්ශනික දෘෂ්ඨි හැට දෙකක් වූ බව සඳහන් කරයි. භාරතීය ජන කේන්ද්‍රය තුළ නිරන්තරව සංසරණය වූ දාර්ශනික මත ප්‍රධාන වශයෙන් දහයක් වූ බවත් ඒවාට බුදුරජාණන් වහන්සේ එක එල්ලේ පිළිතුරු ලබා නොදුන් බවත් සහ එවැනි පැනයන්ට ලබා දුන් පිළිතුරුත් වූල මාලුතා සූත්‍රයෙහි සඳහන් කොට ඇත. මෙකල සමාජය දාර්ශනික වශයෙන් කොතරම් නොසන්සුන්තාවයක් නිරූපණය කලේ දැයි යන්න තවදුරටත් සුක්ත නිපාතයේ අවධික හා පරායන වග්ග වල සවිස්තරව සටහන්ව තිබේ. මෙකල දර්ශනයන් උච්ඡේද හා ශාස්වත වශයෙන් බෙදී තිබුණ අතර මේ දෙයන්තයම ප්‍රතික්ෂේප කොට මධ්‍යස්ථ මාර්ගය යහපත් බවත් ඒකී මාර්ගය ගුරුකොට ගනිමින් ධර්මය දෙසීම බුදුරජුන්ගේ මාර්ගය වූ බවත් පෙනීයයි. බුදු දහමේ සාරගර්භය වතුරායී සත්‍ය හා ආයී අෂ්ටාංගික මාර්ගය යන කොටස් දෙකෙහි කැටි වී ඇත. අවබෝධය මූලික කරගත් ධර්මයත්, ශාසනයේ ආයුෂය වූ විනයත් පරිසාමාප්තික පුහුණුව වශයෙන් සලකා මෙකී ධර්මය හා විනය ප්‍රගුණ කොට බෞද්ධ ඉගැන්වීම් වල ව්‍යුහාව ඇතුළත්තයෙන්ම අධ්‍යයනය කිරීම උචිතය. එකිනෙකට බද්ධ වූ ධර්මය හා විනය තුළ බෞද්ධ දර්ශනය ගැබ්ව ඇති බව පැහැදිලි ය. වතුරායී සත්‍යයෙහි අවසාන සත්‍ය වූ දුක්ඛ නිරෝධගාමිණී පටිපටා අරිය සත්‍යය තුළ ඇත්තේ අන් කවරක් නොව ආයී අෂ්ටාංගික මාර්ගය විමද, ආයී අෂ්ටාංගික මාර්ගයෙහි පළමුවැන්න වූ සම්මා දිරීඨිය තුළ ඇත්තේ ද වතුරායී සත්‍ය විම තුළද බෞද්ධ දර්ශනයෙහි වූ අභ්‍යන්තර ඒකීය භාවය සහතික වේ.<sup>[1]</sup>

අපර්ව වේදයෙහි උපවේදයක් වශයෙන් හැඳින්වූ ආයුර්වේදය නමැති ජීවන දර්ශනය කෙරෙහි වූ හැඳින්වීමෙහිලා විග්‍රහයද වටින්නේය. ආයුර්වේදය වූ කලී ආයුෂයට සම්බන්ධ විද්‍යාවයි. විද්‍යාවේ උපත තුළ අවිද්‍යාව මගහැරී යයි. වර්තමානික පාරභෞතික සිද්ධාන්තයන්ට එහාගිය මෙකී ආයුෂය මූලික කරගත් දර්ශනය සැබැවින්ම මරණයට ප්‍රතිපක්ෂ විද්‍යාව රැගෙන එයි. ජීවිතයේ උපතේ සිට මරණය දක්වා හසුරුවන ආයුෂය නැමැත්ත රදවාගැනීමට ආදාල වූ සිරිත් විරිත් සමූදායකින් මෙකී දර්ශනය සුපෝෂිතය. හෙළ රැස සුවපත් වූ ආයුර්වේද ජීවන දර්ශනය සැබැවින්ම මැදුම් පිළිවෙතෙහි සංකේතයක්ම වේ. සැහැල්ලු දිවි පෙවතේ පදනම මැදුම් පිළිවෙතයි. සැබැවින් ම ආයුර්වේදය තුළින් බහුභාණ්ඩික පුහුණුත් මානවයාට ලබාදෙන පිටුබලය දෙවනි වෙතොත් ඒ නිවන් මගට පමණක් විය හැක. ආයුර්වේදයෙහි මූලික තැන සම්මා ආජීවයට ලැබෙන බව නොරහසකි. එය හුදු මෙලොව කේන්ද්‍ර කරගත්තාක් පමණක් නොව පරලොව සුබසිද්ධිය උදෙසාත් වූ බවත්, පින් පවි මත ගොඩනැගුණු පිළිවෙතක් බවත් පෙනීයයි.<sup>[2]</sup>

දෙවියන්ගෙන් ආයුර්වේදය මිහිමතට ආ පුවත වරක සංහිතා සූත්‍ර ස්ථාන හතර හා පහ ශ්ලෝක වල එයි. එයට අනුව මහාබ්‍රහ්මයා ස්වයංභූ ඥානයෙන් අවබෝධ කරගන්නා ලද ආයුර්වේදය ඉන්පසුව ප්‍රජාපතී, අශ්විතී සහෝදරයන්, ඉන්ද්‍ර, භාරද්වාජ ලෙසින් හුවමාරු වෙමින් ආයුර්වේදාවතරණය වී ඇත.<sup>[3]</sup> මෙකී වෘත්තාන්තය මනාකල්පිතයක් බව බොහෝ වියත් මතයයි. ආයුර්වේදය මිනිසාට දීර්ඝ ජීවිතයකට මාර්ගය කියාපාන ශ්‍රේෂ්ඨතම වෛද්‍ය මාර්ගයයි. මෙය ලෙඩ සුවකිරීමට පමණක් ලඝු වූවක් නොවේ. සාමාන්‍ය දෛනික ජීවිතය සැපවත් කිරීමට මෙන්ම නිරෝගීභාවයට අඩිතාලම ගෙනමින් ස්වස්ථ ආතුර දෙපාර්ශවයටම සමාන වැදගත්කමක් සහ අවධානයක් ලබාදෙමින් ජීවත් වීමේ නිවැරදි කලාව හෙලිකරයි. වරක, සුග්‍රත, අෂ්ටාංග භාදය යන මූලික සංහිතා ග්‍රන්ථ විදුහුරු පඩිවදන් වලින් පෝෂිතව නිරෝගීමත් ජීවිතයකට මාර්ගය හෙලිකරයි. ස්වස්ථ, ආචාර විධි, පමණකුදු නොව සදාචාර උපදේශයන්ගෙන් ද ආයුර්වේදය සමන්විතය.<sup>[4]</sup>

**පර්යේෂණ ගැටළුව**

බෞද්ධ දර්ශනයේ හා ආයුර්වේදය අතර පවතින දාර්ශනික සම්බන්ධතාවය කුමක්ද?

**පර්යේෂණ අරමුණ**

බෞද්ධ දර්ශනය තුළ හා ආයුර්වේදය අතර පවතින සමානතාවයන් හා වෙනස්කම් අධ්‍යයනය.

**පර්යේෂණ ක්‍රමවේදය**

ග්‍රන්ථ පරිශීලනයෙන්, අන්තර්ජාලයෙන්, පුවත්පත් හා සඟරා අධ්‍යයනයෙන්, ලබාගන්නා තොරතුරු මත බෞද්ධ දර්ශනයේ හා ආයුර්වේදයේ සමානතාවයන් හා වෙනස්කම් සැසඳීම.

**සාකච්ඡාව**

**දර්ශනයක් යනු?**

දර්ශන ශබ්දය “දෘශ්” ධාතුවෙන් සහ “ලියුච්” ප්‍රත්‍යයෙන් නිර්මාණය වූවකි. දෘශ්‍යයෙන් අනේන ඉති දර්ශනම් වශයෙන් දර්ශනය නිර්වචනය කර ඇත. එහි තේරුම වනුයේ දැක්ම සිදු කරනුයේ කෙසේද එය දර්ශනයක් යන්නයි. එසේම යදාර්ථ ඥාන සාධකම් දර්ශනම් ලෙසද හඳුන්වා ඇත. එහි තේරුම යමකින් අවබෝධ ඥානය ලබාදෙන්නේද එය දර්ශනයක් යන්නයි. දර්ශනයක් මගින් ලෝකය නිර්මාණය පිළිබඳව, දුකට හේතුව, දුක නැති කිරීමට විසඳුම් සේම අසත්‍ය හරණය, අඥාන හරණය හා සත්‍ය සාක්ෂාත්කරණය වීමද සිදුවිය යුතුය. භාරතයේ පැවති දර්ශන ආස්තිය, නාස්තිය, ආස්තිය නාස්තිය වශයෙන් ප්‍රධාන කොටස් තුනකට බෙදා දක්වා තිබේ.

**බෞද්ධ දර්ශනයේ හා ආයුර්වේදයේ අරමුණු**

**බෞද්ධ දර්ශනය**

සාංසාරය දුක බව පිලිගැනීමත් නිවන පරම සුවය බව ඥානාන්විතව දැකීමටත් බෞද්ධ දර්ශනය කියාදෙයි, එහෙයින් පුහුදුන් මිනිසාගේ ඒකායන අරමුණ විය යුත්තේ පරම සැපත වූ නිවන ලබාගැනීමට උත්සුක වීම බවත් බුදුරදුන් පෙන්වා දී ඇත. බුදුරජාණන් වහන්සේ සැවැත් නුවර රට්ටක බමුණාගේ අසපුවේදී හික්ෂුන් අමතා අරිය පර්යේෂණ සූත්‍රය දේශනා කරමින් තමන්වහන්සේ නිවන සොයා ගත් අන්දම විස්තර කොට ඇත. ජාති, ජරා, ව්‍යාධි මරණයෙන් තොරවූ නිර්වාණය අසංඛන යන පාරිභාෂිත වචනයෙන් ඇතැම් ස්ථාන වලදී හඳුන්වා ඇත. නිවනට යෑම තුළින් ස්වාර්ථය මෙන්ම පරාර්ථය මුදුන්පත් කොට හැකි බව උන්වහන්සේ පෙන්වා දී ඇත. බුදුරදුන් පෙන්වා දුන් මාර්ගයේ අරමුණ එකක්ම වේ. එහි කිසිදු බහුවිධ භාවයක් නැත. මෙහිදී සදහන් කළ යුතු සුවිශේෂී කරුණක් වේ. ඇතැම් ස්ථානවල පෙර ඇලීම්වල ප්‍රතිඵල සහිත නිර්වාණය(සෝපාදිසේස) යනුවෙන් සදහන් කොට ඇත. එහි අරුත විමසීමේදී නිවන පිළිබඳ කරුණු හෙළිවෙයි. මෙහිදී පෙර භවයන්හි පවතින ඇලීම්වල ප්‍රතිඵල තවම පවතින බවත් එනමුත් ආර්ය මාර්ගයහි ගමන් කිරීම හේතු කොටගෙන අකුසල් වැඩීමක් තවදුරටත් සිදු නොවේ යන්නත් හැඟවේ. දෙවනුව නිර්වාණය පෙර ඇලීම් වල ප්‍රතිඵල රහිතව (අනුපාදිසේස) යනුවෙන් ද හඳුන්වනු ලැබේ. එසේ හඳුන්වනු ලබනුයේ ආර්යගාමී මහාරහතන් වහන්සේ නමකගේ සවිඥාණභාවය අවසන් වීමෙන් පසු නැවත ඉපදීමට හේතු වූ කාරණාවන් අත් හැර දමන ලද බැවින් සහ තවදුරටත් භවයෙහි සිටීමට හේතුවන කිසිදු කර්මයක් රැස් කිරීමකින් තොරවන නිසාත්ය. එසේම පෙර ඇලීම් වල ප්‍රතිඵල තවදුරටත් මෙම අවස්ථාවට පත්වීමේදී දැකිය නොහැකි වේ.<sup>[5]</sup>

**ආයුර්වේදයේ අරමුණ**

ආයුර්වේදයේ ප්‍රධාන අරමුණු දෙකක් ඇති බව විස්තර වේ. එයට අනුව නිරෝගී පුද්ගලයාගේ නිරෝගීභාවය රැකගැනීම සහ රෝගී පුද්ගලයාගේ රෝගීභාවය සංසිද්ධිම සිදුවේ.<sup>[6]</sup> නිරෝගී භාවය පවත්වා ගැනීම උදෙසා දින වයා, සෘතු වයා, සඳ්වෘත්ත වයා වැනි බොහෝ දෑ සවිස්තරාත්මක ව විස්තර වන අතර අංග අටකින් සමන්විත ආයුර්වේදය තුළ රෝගී පුද්ගලයාගේ රෝගී භාවය නැතිකරන අයුරු විස්තරාත්මකව දක්වා ඇත. එසේම ධර්ම, අර්ථ, කාම, මෝක්ෂ යන සතර පරමාර්ථයන් මුදුන්පත් කරගැනීම ආයුර්වේදයේ තවත් අභිප්‍රායකි. පුද්ගලයෙක් රෝගී භාවයට පත්වන විට මෙම සතර පරමාර්ථයන් මුදුන්පත්කරගැනීමට නොහැකි වීමෙන් ජීවිතයේ ලබන ශ්‍රේෂ්ඨත්වය මඟහැරෙන බව ආයුර්වේදයේ විස්තර වේ.<sup>[7]</sup>

**බෞද්ධ දර්ශනය හා ආයුර්වේදය තුළ අරමුණු වෙත ළඟා වෙන මාර්ගයන්**  
**බෞද්ධ දර්ශනය**

කිසියම් ගසක මූලට උපද්‍රවයක් රහිතව පවතින තාක් කල් එම ගස කොතෙක් කැපුවත් නැවත නැවත ලියලන්නා සේ තණ්හාවත් තණ්හාව සමග බැඳුණු අනෙකුත් ක්ලේශයන්හුත් සම්පූර්ණයෙන් නොනසන තාක් මේ සංසාරික දුක නැවත හටගන්නා බව සූත්‍ර දේශනාවන් තුළ විස්තර වේ. දුකට හේතුව තණ්හාව බවත් දුක නැතිකිරීමට නම් තණ්හාව නැති කළයුතු බවත් එය එක එල්ලේ සිදුකිරීමේ නොහැකියාව මත පියවරින් පියවර පූරණය කළ යුතු මාර්ගයක් බුදුරදුන් මැනවින් දේශනාකොට වදාළා ඇත. වතුරායී සත්‍ය මෙම දුක පිළිබඳව ගැඹුරු විග්‍රහයක් ඉදිරිපත් කරයි. දුඛායී සත්‍යය, දුඛ සමුදයායී සත්‍යය, දුඛ නිරෝධායී සත්‍යය, දුඛ නිරෝධ ගාමිනී පටිපදා ආයී සත්‍යය වශයෙන් වන මෙම සත්‍යය සතරෙහි අවසාන සත්‍යය තුළ දුකෙන් නිදහස් වීමේ මාර්ගය විස්තර කරදෙයි. එම උත්තරීතර මාර්ගය වනුයේ ආයී අෂ්ටාංගික මර්ගයයි. සම්මා දිට්ඨි, සම්මා සංකප්ප, සම්මා වාචා, සම්මා කම්මන්ත, සම්මා ආජීව, සම්මා වායාම, සම්මා සතී, සම්මා සමාධි වශයෙන් ඇත්තේ එම අරි අට මාර්ගයයි. ත්‍රිශික්ෂාව වශයෙන් වදාළා ඇති ශීල, සමාධි, ප්‍රාඥා තුළ අන්තර්ගතවනුයේද මෙම අරි අටයි. ආයී අෂ්ටාංගික මාර්ගය අනුක්‍රමයෙන් එකක් පසු පස එකක් වශයෙන් පූරණය කළ යුත්තක් ලෙස දක්වා නැත. එබැවින් ඒවා අදියර ලෙස හැඳින්වීම අනුචිතය. වඩාත් සුදුසු වන්නේ අංග යන යෙදුමයි. එබැවින් එකින් එක වෙළී පැටලෙමින් සෑම එකකින්ම තනි කඹයකට උපරිම සවියක් වන ලණු පොටවල් අටක ස්වරූපයක් වන බව දැකීම උචිතය.<sup>[8]</sup>

**ආයුර්වේදය**

ආයුර්වේදයේ ස්වස්ථයාගේ ස්වස්ථ භාවය රැකගැනීමට මාර්ගයන් ස්වස්ථවෘත ලෙස විස්තර කොට ඇත. ඒ සඳහා දින වයා, සෘතු වයා, රාත්‍රී වයා, වේගධාරණ, රසායන තන්ත්‍ර, සඳ්වෘත පඪි නුවණැසට ගෝචරවූ උපදේශ මාලාවක් ලෙසින් ඉදිරිපත් කොට ඇත. මානුෂ්‍යාගේ ජීවිතය ආයුෂය මත රඳාපවතී. මෙම ආයුෂය හිතායු, අභිතායු, සුඛායු, දුඛායු ලෙස හතර ආකාරය. ඒවා ප්‍රමාණාත්මකව ආයුර්වේදයහි ඉදිරිපත් කොට ඇත.<sup>[9]</sup> මෙම ආයුෂ ප්‍රමාණය ගණනය කරනු ලබනුයේ සංවත්සර හෙවත් වසර නැමැති ඒකක වලිනි. එබැවින් දවස යන යෙදුම අතිශය වැදගත් වන අතර දවස ගතකරන අයුරු ආයුෂය කෙරෙහි බලපායි. එබැවින් ආයුර්වේදය දවස කෙරෙහි දක්වන සැලකිල්ල සුළුපටු නැත. සැබැවින්ම ධර්ම, අර්ථ, කාම, මෝක්ෂ යන සිව්වන සැපත ලබාගැනීමට නම් දෛනික ජීවිතය ගතකළ යුතු අයුරු සැබැවින්ම වැදගත්වේ.<sup>[10]</sup> ආතුරයාගේ රෝගීභාවය සුවපත්කිරීමට විද්‍යානුකූල විකිත්සා පද්ධතියක්



ආයුර්වේදය සතුය. ධාතු විෂමතාවයකදී ධාතු සමතාවයට පත්කිරීමේ අරමුණු ඇතිව හිෂක් ආදී වූ වතුශ්පාදයෙහි පවතින ප්‍රශස්ථ භාවය විකිත්සාව ලෙස හඳුන්වා ඇත.<sup>[11]</sup> ව්‍යාධියක් නැතිකිරීමට සිදුකරනු ලබන දෙය මගින් දෝෂ, ධාතු, මල වල සාමන්‍ය කටයුතු සිදු වී ව්‍යාධිය නැති වේ. දෝෂ, ධාතු, මල වල සාමාන්‍ය භාවයට පත් කිරීම විකිත්සාව නම් වේ. එම විකිත්සා ප්‍රතිකාරය වෙදුන්ගේ වෙදකම ලෙසද තවදුරටත් දක්වා ඇත.<sup>[12]</sup>

ද්විවිධ විකිත්සාව, ත්‍රිවිධ විකිත්සාව, චතුර්විධ විකිත්සාව, පංචවිධ විකිත්සාව, ශඩ්විධ විකිත්සාව, දශවිධ විකිත්සාව ලෙස විකිත්සාව වර්ගීකරණය කළ හැක. මෙම නිවරදි විකිත්සාව තුළින් රෝගය සුවපත් වීමේ මාර්ගය උදා වේ.

**බෞද්ධ දර්ශනයේ හා ආයුර්වේදයේ සදහන් මූලික සංකල්ප**

**චතුර් භුත-**

**බෞද්ධ දර්ශනය**

රූප යන සංකල්පයක් බෞද්ධ දර්ශනයේ වේ. මෙහි මූලික අරුත ශරීරය යන අදහසින් එයි. වෙනස්වන ලක්ෂණය මෙම රූප යන්නට එක සමානව පොදු වන නමුදු මහා භූත රූප, උපාදාය රූප වශයෙන් රූප දෙවර්ගයකට බෙදා දක්වයි. රූපයක් උපදවන, හට ගත්වන යන අර්ථයෙන් භූත රූප යන නම යොදයි. රූපයන් නිසා පවත්නා රූප උපාදාය රූප නම් වන අතර පඨවි, ආපෝ, තේජෝ, වායෝ යනුවෙන් භූත රූප සතර ආකාරයකි. අධික තද ගතිය පඨවි ධාතුවේද, වැගිරෙන ස්භාවය ආපෝ ධාතුවේද, උණුසුම් භාවය තේජෝ ධාතුවේද, සැලෙන ගතිය වායෝ ධාතුවේද මූලික ලක්ෂණ යැයි අභිධර්මයේ විස්තර වේ. එමෙන්ම අභිධර්ම විග්‍රහයන්ට අනුව මේ ධාතු වෙන් වෙන් වශයෙන් නොපවතිනා බවත් සියල්ලෙහිම ධාතු සතරම පවතින බවත් දැක්වේ.<sup>[13]</sup>

**පංච මහා භුත**

**ආයුර්වේදය**

සියළුම ද්‍රව්‍ය පංච භෞතික බව ආයුර්වේදයේ සදහන් ය.<sup>[14]</sup> ආකාශ, වායු, අග්නි, ආප්, පෘථිවි මහාභුත වශයෙන් සලකයි. මහාභුත නිර්මාණය වීම තත්මාත්‍ර, භූත, හා මහා භුත වශයෙන් වේ. එමෙන්ම මෙම පංච භුත කාරණ ද්‍රව්‍ය වල අන්තර්ගතවේ. “භූ” ධාතුවට “ක්ත” යන ප්‍රත්‍ය එක්වීමෙන් සැදුණු භුත යන්නෙහි අරුත සදාකල් පවතින යන්නය. මහාභුත භුතයන්ගේ ස්ථූල අවස්ථාව වන අතර හඬ, ස්පර්ශ, රූප, රස ගන්ධ ඒවායේ ගුණ ලෙස දැක්වේ. ගර්භ විකසනය, ශරීර අවයව, ත්‍රිදෝශ, සප්ත ධාතු, ත්‍රිමල, දේහ ප්‍රකෘති, ෂඩ් රස, භූතාග්නි, මර්ම, ධමනි, ආදි ද්‍රව්‍යන්ගේ ගුණ කර්ම විශේෂ ආශ්‍රිතව පංච භෞතික සම්බන්ධයක් පවතින බව ආයුර්වේදයහි මැනවින් විස්තර වේ.

**කර්ම සංකල්පය**

**බෞද්ධ දර්ශනය**

චේතනාව කර්මය වශයෙන් බෞද්ධ ඉගැන්වීම් වල සදහන් ය. එබැවින් බෞද්ධ කර්ම විභාගයේ විශේෂත්වය ලෙස මෙම චේතනාවට මුල් තැන දීම ගත හැක. මේ පිළිබඳව මැනවින් නිබ්බේධික පර්යාය සහ චූල්ල කම්ම විභංග සූත්‍රයෙහි හඳුන්වා දී ඇත. චේතනාව මුල්වී කය, වචනය හා සිතෙන් කරනු ලබන කර්මයන් කාය කර්ම, වචි කර්ම, මනෝ කර්ම ලෙස ආකාර තුනකට බෙදී යයි. තවද කුසල හා අකුසල වශයෙන් කර්මය විනිශ්චය කිරීම සිදුකරනු ලබයි. තවදුරටත් පැහැදිලි කරගතයුතු කර්මයට අමතර කර්ම පඨයක් බුදු දහම තුළ ඉගැන්වේ. ප්‍රතිසන්ධි විපාකයක් ලබාදීම සදහා ඇති ප්‍රතිඵලදායී



ශක්තිය කර්ම පථය නම්. කර්ම චේතනාවක් ක්‍රියාත්මක වී එය සම්පූර්ණ වූ විට එය කර්ම පථයක් බවට පත් වේ. බෞද්ධ දර්ශනයේ වූ තවත් සුවිශේෂ තත්ත්වයක් වනුයේ සියල්ල සිදුවන්නේ පෙර කරන ලද කර්මයටයි සැලකූ පුබ්බේකත හේතු වාදය ප්‍රතික්ෂේප කිරීමයි. එසේම සැබැවින්ම සිදුවනුයේ පටිච්ච සමුප්පාද මූලධර්මයට අනුව කර්මය හා විපාකය ක්‍රියාත්මක වන බව යැයි බුදුරජාණන් වහන්සේ දෙසූ සේක.

**ආයුර්වේදය**

ආයුර්වේදයේද කර්මය යන්න විස්තර වේ. ෂඩ් පදාර්ථ වල කර්ම නම් පදාර්ථයක් වේ. මෙහි මූලික ලක්ෂණය වනුයේ සංයෝගය හා විභාගයයි. එනම් එකට එක් වීම හා වෙන්වීමයි. යම් ද්‍රව්‍යයක් අශ්‍රිතව සංයෝගය හා විභාගය අශ්‍රය කරගනිමින් යම් කායීක් සිදුවේ ද එය කර්මය යනුවෙන් හඳුන්වා ඇත.<sup>[15]</sup> මෙහිදී තවත් සුවිශේෂත්වයක් වනුයේ කර්මයකින් බලාපොරොත්තු වන කර්මයට අමතරව වෙනත් කර්මයක් අපේක්ෂා නොකිරීමයි. කර්මය විවිධ නම් වලින් ආයුර්වේදයේ විස්තර වේ. වේෂ්ඨා, ප්‍රචාන්ති, ක්‍රියා, කර්ම, යන්න, කායී, සමාරම්භ එවැනි නාමයන්ය. කර්මය විකිත්සාව සමගද සම්බන්ධ වේ. සාමාන්‍ය විශේෂ සිද්ධාන්තයේ දී කර්ම සාමන්‍ය තුළ සමාන කර්මයන් කිරීමද, කර්ම විශේෂ තුළ ප්‍රතිවිරුද්ධ කර්මයන් එනම් විශේෂස්තු විපර්යයක් යන්නද භාවිතා වේ. එසේම ශමන කර්ම, ශෝධන කර්ම, පුර්ව කර්ම ,පශ්චාත් කර්ම ආදී ලෙස මෙන්ම, උත්ඡේපන, අපක්ෂේපන, ආකුංචන, ප්‍රසාරණ, ගමන ආදී ලෙසද කර්මය ආයුර්වේදයේ විස්තර වේ.

**මනස**

**බෞද්ධ දර්ශනය**

විඥානය ඇතිවීම උදෙසා විඥාන කාය සයක් අවැසි බව සූත්‍ර දේශනාවල සඳහන් ය. වක්ඛු, සෝත, සාණ, ජීවිතා, කාය, මන යනුවෙන් දක්වනුයේ එම සය ආකාරයයි. මේ ඉන්ද්‍රියන් සය ඇසුරුකොට බාහිර ලෝකයෙන් දැනුම ලබාගනී. මෙයින් මනස සුවිශේෂී ය. මදුපිණ්ඩික නම් සූත්‍ර දේශනාවක ඉන්ද්‍රියන් ඇසුරින් මිනිස් සිත ක්‍රියා කරන ආකාරය පියවරින් පියවර දක්වා ඇත. විශේෂයෙන්ම එහි මනසේ ක්‍රියාකාරිත්වය අනුව මිනිස් චිත්තනය හසුරුවන අයුරු දැක්වෙයි. මනසින්ද කර්මය සිදුකළ හැකි බව මනෝ කම්ම තුළින් පෙන්වා දී ඇත. මිනිසාගේ ජීවිතය ආයු, උස්මා, විඥානය යන ත්‍රිවිධ සාධක සමග බැඳී පවත්නා බවත් ඒවා ඉවත් වූ විට මරණය සිදුවන බවත් බෞද්ධ ඉගැන්වීම් වල හමුවේ. එමෙන්ම බුදුසමය තුළ ප්‍රධාන වශයෙන් පුනර්භවය ද පිළිගැනෙන හෙයින් විඥානය මරණින් පසු උච්ඡේදවීමක් සිදු නොවන බවක් පෙනේ.<sup>[16]</sup>

**ආයුර්වේදය**

ශරීර, ඉන්ද්‍රිය, සත්ත්ව, ආත්මා යන සතරෙන් මිනිසා සෑදී ඇති බව ආයුර්වේදයේ සඳහන් ය. මෙහි සත්ත්ව යනු මනසයි. මනසේ ලක්ෂණ ලෙස ඥානයේ භාවය හා අභාවය දක්වයි. එනම් ඥානයේ පැවැත්ම හා නොපැවැත්මයි. ආත්ම, ඉන්ද්‍රිය හා අර්ථ සන්නිකර්ෂය වුවද මනස සම්බන්ධ නොවන තාක් ඥානය නොපවතී. මනස සම්බන්ධ වුවහොත් පමණක් ඥානයේ පැවැත්මක් ඇතිවන බවත් මනසේ ක්‍රියාවන් අචේතන බවත් දැක්වේ.<sup>[17]</sup>

**ආත්ම සංකල්පය**

**බෞද්ධ දර්ශනය**

භාරතීය දර්ශන ඉතිහාසයේ උපනිෂද් යුගය තුළ නොයෙක් අයුරින් අර්ථ විග්‍රහ කරන ලද ප්‍රධානතම දාර්ශනික සංකල්පය වූයේ ආත්මය යන්නය. මම යනු කවරෙක්ද යන්න මේ සමගාමීව ගොඩනැගුණු පැනයකි. මම යනු රූපයද, වේදනාවද, සඤ්ඤාවද, සංස්කාරයද, විඥ්ඤානයද යන ගැටළුව ඔස්සේ චින්තනය වෙහෙස විමෙන් ආත්මවාදය උපන්නේය. සත්ත්වයා තුළ ස්ථිර වූ සදාකාලික වූ නිත්‍ය වූ ආත්මය පුද්ගලයාගේ මරණයෙන් පසු නිරයෙහි හෝ ස්වර්ගයෙහි නිත්‍ය භාවය ලබන බවද එය පුර්ණ පවිත්‍රත්වය ලද පසු තම මූල වූ බ්‍රාහ්මයාට එක් වේ යැයි ද බොහෝ දර්ශන වල ඉගැන්විණි. එනමුත් බෞද්ධ දර්ශනය තුළ ආත්මවාදය නුවණින් මෙනෙහි කොට උපන් විපරිත දෘෂ්ටියක් ලෙස සලකා බැහැර කොට පවතී. පංචස්කන්ධය තණ්හා, මාන, දිට්ඨි වශයෙන් ගෙන ආත්මා දෘෂ්ටිය උපදින බව පෙන්වාදී ඇත. පංචස්කන්ධය ක්‍රියාත්මක වනුයේ ආත්මයක වෙහෙස විමෙන් නොව නාම, රූප ධර්මයාන්ගේ සාපේක්ෂ හේතු ඵල සම්බන්ධය මත බව බුදුරජාණන් වහන්සේ වදාළහ.

**ආයුර්වේදය**

නව කාරණ ද්‍රව්‍යවලින් එකක් ලෙස ආත්මා ආයුර්වේදයේ පිළිගන්නා අතර පොදුවේ ආත්මා ජීවත්මා සහ පරමාත්මා යන උභයාර්ථයෙන් දක්වා ඇත. ආත්මා ක්‍රිගුණයන්ගෙන් තොර බවද නිත්‍ය බවද, පරම සුක්ෂ්ම බවද, සුඛ, දුඛ, ඉච්ඡා, ද්වේෂ, ප්‍රාණ, අපාණ, උත්මේෂ, නිමේෂ, බුද්ධි, ස්මෘති යන ගුණයන්ගෙන් ආත්මා යුක්ත බවද දැක්වේ. ශ්‍රේෂ්ඨ වූ, නිර්විකාර වූ චේතනාව ශබ්දාදී කරණාදී ඉන්ද්‍රියන් යන මේවායින් සිතුවිලි විෂය ඇතිවීමට හේතු වෙයි. ප්‍රත්‍යක්ෂ වශයෙන් සෑම ක්‍රියාවක්ම දක්නා වන්නේද ආත්මය යැයි ආයුර්වේදයේ කියවේ.<sup>[18]</sup>

**ධාතූ**

**බෞද්ධ දර්ශනය**

ධර්ම ග්‍රන්ථයන්හි ධාතූ යන වචනය අර්ථ කීපයකින්ම සදහන් කොට ඇත. ඉන් එක් අර්ථයක් නම් උසුලන, ධාරණ යන අරුතයි. ඒ අනුව සත්ත්වයා විසින් මේ වක්ඛු ආදී ධාතූ උසුලන බැවින් ධාතූ ලෙස දක්වයි. ඒ හැරුණු කොට මේ ධාතූන් සත්ත්වයාට සසර දුක ඇති කරනවා යන්නද ව්‍යවහාර වේ. මෙහිදී ධාතූ යන්න දහ අටකට බෙදා දක්වා ඇත. ඒවා ඉන්ද්‍රිය, ආරම්භණ, ඉන්ද්‍රිය විඤ්ඤාණ යන අංශ තුන තුළ අන්තර්ගත වන බව පෙනේ. මෙම ධාතූ විභාගයෙන් බුදුරජාණන් වහන්සේ අපේක්ෂා කළේ නිස්සත්ත, නිජ්ජීව භාවය ප්‍රකට කිරීමයි.

**ආයුර්වේදය**

සජ්ත ධාතූ යනු ආයුර්වේදයේ මූලික පදනමකි. රස, රක්ත, මාංශ, මේදස්, අස්ථි, මජ්ජා, ශුක්‍ර යනු ඒ සතයි. ශරීරය ධාරණය හා පෝෂණය කිරීම මෙමගින් සිදුවන අතර සජ්ත ධාතුව පංච භූතයන්ගෙන් නිර්මිත ය. ප්‍රීණනය රස ධාතුවේද, ජීවනය රක්ත ධාතුවේද, ලේපණය මාංස ධාතුවේද ස්නේහනය මේදස් ධාතුවේද, ධාරණය අස්ථි ධාතුවේද, පූරණය මජ්ජා ධාතුවේද, ගර්භ උත්පාදනය ශුක්‍ර ධාතුවේද කාර්යය ලෙස දක්වා ඇත. සජ්ත ධාතුව දුෂණය විමෙන් රෝග හටගනී. දුෂිත වූ ධාතූ දුෂ්‍ය වශයෙන් ආයුර්වේදයේ සදහන් ය. දෝෂ දුෂ්‍ය සම්මුර්ජනයෙන් රෝගයක් හට ගන්නා බව දක්වා ඇත. තවද සජ්ත ධාතුවේ සාර කොටස ඕජස් නමින්ද එය ශරීර බලයට හා ව්‍යාධි ක්ෂමත්වයට හේතු වන බව දැක්වේ. ධාතූ උපධාතූ හා ධාතූ මල වලින් යුක්තය.

**වේදනාව**

**බෞද්ධ දර්ශනය**

යමක විදීම වේදනාව ලෙස දක්වා ඇත. වේදනාවන් පංචේන්ද්‍රියන් හා ඉතා කිට්ටු සම්බන්ධතාවයක් පෙන්වයි. වේදනාවද පටිච්ච සමුප්පන්න වන නිසා අනිත්‍ය ලක්ෂණයෙන් යුක්ත, අස්ථිර, දෙයක් ලෙසද ඒ නිසා දුකක් උපදින බවත් පෙන්වා දී ඇත. වේදයීන සුඛයන් හා අවේදයීන සුඛයන් සම්බන්ධවද දේශනා කර ඇති අතර මජ්ඣිම නිකායේ එන වේදනීය සුත්‍රයේද මෙලෙස විදිය යුතු (දිට්ඨ ධම්ම සුඛ විහාර) ධ්‍යාන සුවයන් ගැන විස්තර වේ. ඒවා වේදයීන සුඛයන් ලෙස දක්වන අතර නිරෝධ සමාපත්ති නිර්වාණය අවේදයීන සුඛය ලෙසත් පරම සුඛය ලෙසත් දක්වා ඇත.

**ආයුර්වේදය**

වේදනාව රුක්, දාහ, තෝද, ශූල, වැනි නාමයන්ගෙන් හඳුන්වා ඇත. වේදනාව “විද්” ධාතුවෙන් සෑදී ඇති අතර දුක්ඛ වේදනාව හෙවත් ප්‍රතිකූල වේදනාව හා සුඛ වේදනාව හෙවත් අනුකූල වේදනාව ලෙස ආකාර දෙකකි. සුඛ වේදනාව නිරෝගී භාවයටද, දුඛ වේදනාව රෝගී භාවයටද හේතු වේ.

**ව්‍යාධි**

**බෞද්ධ දර්ශනය**

ආරෝග්‍යා පරමා ලාභා වශයෙන් බෞද්ධ දර්ශනයේදී පරම ලාභය ලෙස නිරෝගී භාවය පෙන්වා දී ඇත. බෞද්ධ දර්ශනය මූලික වශයෙන් මනස මුල්කරගනිමින් මානසික සුවතාවය අරමුණු කරගත්තක් පමණකුදු නොව කායික මානසික සුවතාවය උදෙසා දේශිත ධර්ම මාර්ගයකි. පරලොව සුභ සිද්ධිය පමණක් ආපේක්ෂා නොකළ හෙයින් මෙලොව ජීවිතය සුවපත් කිරීමටද ධර්ම මාර්ගය මඟ පෙන්වීය. කායික හා මානසික රෝග පිළිබඳ ගැඹුරු විග්‍රහයක් ගිරිමානන්ද සුත්‍රයේ වේ. කායික රෝග තිස් දෙකක් පිළිබඳ සවිස්තර විස්තරයක් බුදුරදුන් පෙන්වා වදාළහ. බොජ්ජංග සුත්‍රයද මෙවැනි රෝග සම්බන්දව සදහන් වන අතර පුතිගත්තතිස්ස තෙරුන් රෝගාතුර වූ විට තමන් වහන්සේම උවටැන් කොට රෝගීන්ට උවටැන් කිරීම බුදුරජාණන් වහන්සේ ට සැලකීම හා සමාන බවද එයින් ලැබෙනා කුසලානීඤංසය අති මහත් බවත් ධර්ම කථා කුළ විස්තර වේ. තවද අති හෝජනය නිසා පීඩා විදි කොසොල් රජුට තරබාරු භාවයෙන් මිදීමේ මාර්ගය බුදුරදුන් විස්තර කොට ඇත. බ්‍රාහ්මණ ධම්මික නම් සුත්‍රයේ බ්‍රාහ්මණයා ගුණ ධර්ම වලින් පිරිහෙන්නට පෙර ලෝකයේ තෘෂ්ණාව, බඩගින්න, ජාරාව යන රෝග තුන වූ බවත් යාග හෝමාදී නිසා සිදුවූ සත්ත්ව ඝාතනය හේතුවෙන් අට අනුවක් ව්‍යාධි ලෝකයට බිහි වූ බවත් කියවේ.

**ආයුර්වේදය**

ආයුර්වේදය කායික හා මානසික ව්‍යාධීන් පිළිබඳ ව ගැඹුරින් විග්‍රහ කොට ඇත. වාත, පිත, කඵ යන දෝෂ දූෂ්‍ය සම්මුර්ජනයෙන් රෝග හට ගන්නා බවත් රෝගය වාතජ රෝග අසුවක්, පිත්තජ රෝග හතලිහක්, කඵජ රෝග විස්සක් වන බවත් කියවේ. මානසික රෝග රජස් හා තමස් යන මානසික දෝෂ නිසා උපදින බවත් පුද්ගලයාගේ නිරෝගී භාවයට දෝෂ, අග්නී, ධාතූ, මල, ආත්මය සහ මනසේ සමතාවය අත්‍යාවශ්‍ය බවත් කියවේ. ධාතූ වල සිදුවන අසමතුලිතභාවය විකෘතියට ඉවහල්වන බවත් ඒවායේ සාමාන්‍ය ප්‍රකෘතියට ඉවහල් වන බවත් දැක්වේ.<sup>[19]</sup> එසේම වේදනාවේ ස්වාභාවය, වර්ණය, රෝගය ඇතිවූ ස්ථානය ආදිය සැලකීමේදී රෝග ගණනය කළ නොහැකි සංඛ්‍යාවක් පවතින බවත්

කියවේ.<sup>20]</sup> රෝග වර්ගීකරණය ප්‍රභාව, අධිෂ්ඨානය, නිමිත්ත, ආශය මත රඳා පවතී. ද්විවිධ, ත්‍රිවිධ, වකුර්විධ, පංචවිධ, ශඛිවිධ, සප්තවිධ ආදී ලෙස ව්‍යාධි වර්ගකළ හැක.

**නිගමනය**

භාරතීය දර්ශනයන් අතර සුවිශේෂී ස්ථානයන් අත්පත්කරගන්නා බෞද්ධ දර්ශනය මෙන්ම ආයුර්වේදය තුළ අන්තර්ගත සාරගර්භය විමසීමේදී මෙකී දර්ශනයන් ද්විත්වයම සත්ත්වයාගේ සුබසිද්ධිය අරමුණු කොට මනා පදනමකින් බිහි වී තිබෙන්නක් බවත් බොහෝ සමානතාවයන් සේම ඇතැම් පරස්පරතාවයන් තිබෙන බවත් නිගමනය කළ හැකිය. මෙම ද්විත්වයම ලෝකය යහපත් ස්ථානයක් බවට පත්කිරීමෙහිලා සුවිශාල කාර්යභාරයක් සිදුකරන බවද මනාව විමසීමේදී පෙනීයයි. තවද දාර්ශනික වශයෙන් භාරතීය සමාජය තුළ වූ විශිෂ්ඨභාවය හා උසස්භාවයේ වූ ගැඹුරද මෙයින් මනාව පෙනී යයි.

**ආශ්‍රිත මූලාශ්‍ර**

- 1- හික්බ්‍රූ බෝධි හිමි(2011), සිංහල පරිවර්තනය විශේෂඥ වෛද්‍ය එච්.බී.ජයසිංහ, ආයී ආණ්ඩාගික මාර්ගය, දුක නිවීමේ මඟ, මහනුවර, බෞද්ධ ග්‍රන්ථ ප්‍රකාශන සමිතිය, ප්‍රස්තාවනාව (vi) පිටුව
- 2- විශේෂඥ වෛද්‍ය ආචාර්ය අමරසිරි පොන්නම්පෙරුම (2003), ආයුර්වේදයේ ජීවන දර්ශනය, ආයුර්වේද දෙපාර්තමේන්තුවේ ප්‍රකාශනයකි, පෙරවදන (xv) පිටුව
- 3- ආයුර්වේදාචාර්ය විද්‍යානිධි පණ්ඩිත ආරියදාස කුමාරසිංහ (1991) වරක සංහිතා ප්‍රථම භාගය, රජයේ ආයුර්වේද දෙපාර්තමේන්තුව (2) පිටුව
- 4- විශේෂඥ වෛද්‍ය ආචාර්ය අමරසිරි පොන්නම්පෙරුම (2003), ආයුර්වේදයේ ජීවන දර්ශනය, ආයුර්වේද දෙපාර්තමේන්තුවේ ප්‍රකාශනයකි, හැදින්වීම (xvii) පිටුව
- 5- පුජ්‍ය ඤාණපෝෂිත මහ තෙරුන් වහන්සේ, සිංහල පරිවර්තනය එන්.ටී.එස්.ඒ.සේනාධීර, අනන්තා සහ නිබ්බාන, මහනුවර, බෞද්ධ ග්‍රන්ථ ප්‍රකාශන සමිතිය, 17 පිටුව
- 6- පණ්ඩිත ආරියදාස කුමාරසිංහ (1991), වරක සංහිතා ප්‍රථම භාගය, රජයේ ආයුර්වේද දෙපාර්තමේන්තුව, 643 පිටුව
- 7- පණ්ඩිත ආරියදාස කුමාරසිංහ (1991), වරක සංහිතා ප්‍රථම භාගය, රජයේ ආයුර්වේද දෙපාර්තමේන්තුව, 5 පිටුව
- 8- හික්බ්‍රූ බෝධි හිමි (2011), සිංහල පරිවර්තනය විශේෂඥ වෛද්‍ය එම්. බී. ජයසිංහ, ආයී ආණ්ඩාගික මාර්ගය, දුක නිවීමේ මඟ, මහනුවර, බෞද්ධ ග්‍රන්ථ ප්‍රකාශන සමිතිය, 16 පිටුව
- 9- පණ්ඩිත ආරියදාස කුමාරසිංහ (1991), වරක සංහිතා ප්‍රථම භාගය, රජයේ ආයුර්වේද දෙපාර්තමේන්තුව 12 පිටුව
- 10- වෛද්‍ය ඩී.ජේ.එස්.කුමාරනායක, වෛද්‍ය සුනන්ද අයිරාංගනී කුමාරනායක (1993), ගෙදර වෛද්‍යවරයා හෙවත් ගෙදර බෙහෙත් අත්පොත, මහරගම, රුවන් පනුරුව (පුද්ගලික) සමාගම, 2 පිටුව
- 11- පණ්ඩිත ආරියදාස කුමාරසිංහ (1991), වරක සංහිතා ප්‍රථම භාගය, රජයේ ආයුර්වේද දෙපාර්තමේන්තුව, 166 පිටුව
- 12- පණ්ඩිත ආරියදාස කුමාරසිංහ (1991), වරක සංහිතා ප්‍රථම භාගය, රජයේ ආයුර්වේද දෙපාර්තමේන්තුව, 300 පිටුව
- 13- මහාචාර්ය වන්දිම විජේබණ්ඩාර(1996), බෞද්ධ ධර්මාචාර්ය විභාගය අභිධර්මය-බෞද්ධ කටයුතු දෙපාර්තමේන්තුව, 25 පිටුව
- 14- පණ්ඩිත ආරියදාස කුමාරසිංහ (1991), වරක සංහිතා ප්‍රථම භාගය, ආයුර්වේද දෙපාර්තමේන්තුවේ ප්‍රකාශනයකි, 468 පිටුව
- 15- පණ්ඩිත ආරියදාස කුමාරසිංහ (1991), වරක සංහිතා ප්‍රථම භාගය, ආයුර්වේද දෙපාර්තමේන්තුවේ ප්‍රකාශනයකි, 16 පිටුව
- 16- මහාචාර්ය වන්දිම විජේබණ්ඩාර (1996), බෞද්ධ ධර්මාචාර්ය විභාගය අභිධර්මය, බෞද්ධ කටයුතු දෙපාර්තමේන්තුව, 37 පිටුව
- 17- පණ්ඩිත ආරියදාස කුමාරසිංහ (1991), වරක සංහිතා ද්විතියා භාගය, ආයුර්වේද දෙපාර්තමේන්තුවේ ප්‍රකාශනයකි, 5 පිටුව
- 18- පණ්ඩිත ආරියදාස කුමාරසිංහ (1991), වරක සංහිතා ප්‍රථම භාගය, ආයුර්වේද දෙපාර්තමේන්තුවේ ප්‍රකාශනයකි, 18 පිටුව
- 19- පණ්ඩිත ආරියදාස කුමාරසිංහ (1991), වරක සංහිතා ප්‍රථම භාගය, ආයුර්වේද දෙපාර්තමේන්තුවේ ප්‍රකාශනයකි, 166 පිටුව
- 20- පණ්ඩිත ආරියදාස කුමාරසිංහ (1991), වරක සංහිතා ප්‍රථම භාගය, රජයේ ආයුර්වේද දෙපාර්තමේන්තුවේ ප්‍රකාශනයකි, 876 පිටුව

## A COMPARATIVE STUDY ON SĀRĀRTHA SANGRAHAYA AND CARAKA SAMHITĀ

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### ABSTRACT

Traditional Medicines is a holistic health care system in Sri Lanka with an exclusive health belief system. According to the WHO definition Traditional medicine refers to the knowledge, skills and practices based on the theories, beliefs and experiences indigenous to different cultures, used in the maintenance of health and in the prevention, diagnosis, improvement or treatment of physical and mental illness. Therefore *Āyurveda*, *Unāni*, *Siddha* and other complimentary medical systems could be filed under Traditional medical system of Sri Lanka. Ayurveda medicine originated entirely from India. The *CharakaSamhita* is a Sanskrit text on Ayurveda (Indian traditional medicine). It is one of the three works that constitute the Brhat Trayi. Among all the available texts, *CarakaSamhitā* is the oldest and most authentic treatise on *Āyurveda*. As many historians pointed out that the story of Sri Lankan traditional medical knowledge that is related through the 30,000 years old steps of the Balangoda man, which was enlivened, by the archaeological evidence of the pre-Vijaya era. According to the ancient book Mahavamsa-The Great Chronicle- (5th century CE), the Sri Lankan King Buddhadasa (340-398 CE) was claimed to have treated both humans and animals. His extensive work on medicine was *SararthaSangrahaya* (390 CE) meaning "An Essence of Medicine". Some anthropologists think that Sri Lanka had a different medical system from Indian medical systems. But they don't have enough data for prove the hypothesis. The main point they point out is that *SararthaSangrahaya* is a book written about medicine inherited to Sri Lanka. So main aim of this research study was to compare the above mentioned two texts. Accordingly two books were scrutinized and analyzed very carefully. It was possible to find in this research work similarities and differences between these two books.

**Key words** : *CarakaSamhithā*, *SārārthaSangrahaya*, *Unāni*, *Siddha*, *Mahavamsa*



## INTRODUCTION

Traditional Medicines is a holistic health care system in Sri Lanka with an exclusive health belief system. According to the WHO definition Traditional medicine refers to the knowledge, skills and practices based on the theories, beliefs and experiences indigenous to different cultures, used in the maintenance of health and in the prevention, diagnosis, improvement or treatment of physical and mental illness.<sup>[1]</sup> Therefore *ĀyurvedaUnāni*, *Siddha* and other complimentary medical systems could be filed under Traditional medical system of Sri Lanka. Ayurveda medicine originated entirely from India. The *CharakaSamhita* is a Sanskrit text on Ayurveda (Indian traditional medicine). It is one of the three works that constitute the BrhatTrayi. Among all the available texts, *CarakaSamhitā* is the oldest and most authentic treatise on *Āyurveda*. As many historians pointed out that the story of Sri Lankan traditional medical knowledge that is related through the 30,000 years old steps of the Balangoda man, which was enlivened, by the archaeological evidence of the pre-Vijaya era. According to the ancient book Mahavamsa-The Great Chronicle- (5th century CE), the Sri Lankan King Buddhadasa (340-398 CE) was claimed to have treated both humans and animals. His extensive work on medicine was SararthaSangrahaya (390 CE) meaning “An Essence of Medicine”.<sup>[2]</sup> Some anthropologists think that Sri Lanka had a different medical system from Indian medical systems. But they don't have enough data for prove the hypothesis. Sri Lankan traditional medical system based on prescriptions handed down from generation to generation. Then, our ancients have fulfilled huge service to survival and longevity of our medical system. And as per the Mahavamsa all the kings from king *Rāvaṇā* era had done huge contribution to develop the medical system. King Buddhadasa had been a great ruler and ruled Sri Lanka from 341-370 A.D. The King was not only good at his kingship but also had been a good doctor. The king had a great devotion to Buddhism and he was popular as a very pious king. The King was not only a great ruler but also a very skilful doctor. He wrote a unique manuscript which Sri Lankan physicians still use today for references, that is called “*SārārthaSangrahaya*”

It includes medicines even for animals then it proves that ancient Sri Lanka has had an incomparable medical system. While this text was writing, the author of it mainly has considered about *Vṛddhatraī* and other *Āyurveda* books also.

On other hand, Though Ayurveda medical system is included in Sri Lankan traditional medical system, it is the most important to know that *Āyurveda* is not indigenous to Sri Lanka. The mother land of Ayurveda is India. *Āyurveda* is one of the branch of the *Vedas*. It is regarded as *Upaveda* of *Atharvaveda*. There are many treatises on Ayurveda medicine, *Carakasamhitā* is a main treatise and the ancient and the most authentic treatise on *Āyurveda*. *BhagawānpunarvasuĀtreya* is the main person in *CarakaSamhitā*. The *carakasamhitā* has been well known as the most outstanding and authoritative work amongst the *samhitā* of *Āyurveda*. It has been included to *Vṛhatraya* also.

While considering these medical systems, can be observed that there is a clear relationship between these knowledge. Both of these texts are included drugs, health, precepts, preparations, diseases, fundamentals, specific features, human body, fetal signs, treatment, pharmaceuticals and successful management etc.

## REASERCH OBJECTIVES

### General Objective

To do comparative study on *SārārthaSangrahaya* and *CarakaSamhithā*

## METHODOLOGY

Data was collected from *SārārthaSangrahaya* and *CarakaSamhithā*. Then the collected data were compared and analyzed to establish a conclusion.

## RESULTS AND DISSCUSSION

**Table 1: Dissimilarities between *CarakaSamhita* and *SārārthaSangrahaya***

	<i>SārārthaSangrahaya</i>	<i>CarakaSamhithā</i>
Author	King <i>Buddhadāsa</i> <sup>[3]</sup>	<i>Agniveśa</i> 's treatise refined and annotated by <i>Caraka</i> and redacted by <i>Dṛḍhabala</i> <sup>[4]</sup>
Language	Sanskrit	Sanskrit
Time period	in 341 A.D. <sup>[8]</sup>	According to external evidence, it stands between 7th cent.B.C. And 6th cent.A.C.  On the basic of internal evidences <i>Caraka</i> stands between 5th cent.B.C. and 200 A.D. <sup>[9]</sup>
Translations	Into Sinhala language by Mr. <i>Āriyadasa kumarasinghe</i> <sup>[3]</sup>	<ul style="list-style-type: none"> <li>• Complete carakasamhithā was translated into Sinhala language by Mr. R.Buddhadasa in 1960.</li> <li>• Into Persian and Arabic in 10th century A. D.</li> <li>• into Persian and Arabic in 10th century A. D</li> <li>• English translation also came out into in 19th cent</li> <li>• Later on it was translated in Hindi and various regional languages</li> </ul>



The *CarakaSamhitā* has been commented upon by various scholars<sup>[10]</sup>

Name of the commentator	Name of the commentary
Cakrapānidatta	Āyurvedadīpika
BhaṭṭāraHriśhcandra	Caraka-Nyāsa
Swāmikumāra	Caraka-Pañjikā
Āśādhavarmā	Parihāravārttika
Kṣīraswāmidatta	Caraka-Vārttika
Jejjāta	NirantarapadaVyākhyā

*CarakaSamhitā* was translated in various languages from time to time. Complete Carakasamhitā has translated into Sinhala by Mr. R. *Buddhadasa* in 1960.<sup>[11]</sup> And it was translated into Persian and Arabic in 10th century A. D. English translation also came out into in 19th century. After that it was translated in *Hindi* and various regional languages. The Jamnagar edition (1949) contains translation of the text in *Hindi, Gujarati* and English.<sup>[12]</sup>

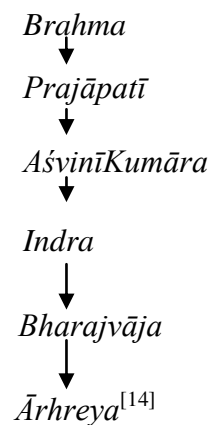
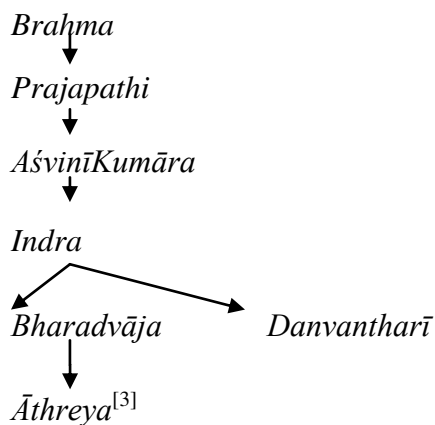
## 1. Texts Arrangement

There are some differences can be observed related to chapters arrangement. *SārārthaSangrahaya*, has 52 *adhyāya* but in *CarakaSamhitā* was divided into *Sthāna* (section) wise and *adhyāya* (chapters) wise also. Then there are 8 sections and 120 chapters.

## 2. Main theories

### I. Ayurveda Avataraṇaya

In this, *CarakaSamhita* is compared based on *SārārthaSangrahaya*. Ayurveda Avataraṇaya has been included in both texts.



## II. Fetal Signs

Both texts have mentioned auspicious signs and bad signs relating to patient and messenger.<sup>[3]</sup> In addition *carakasamhitā* has mentioned auspicious signs and portentous signs in patient's house too<sup>[15]</sup>

*Sārārthasangraha* has mentioned fatal signs in briefly.<sup>[3]</sup> But *carakasamhitā* have been mentioned those facts in detail and gradual manner. As per the CarakaSamhitafatal signs of the voice and complexion leads to the death of patient.<sup>[16]</sup> In addition to that various types of smells and abnormal taste indicating death.<sup>[17]</sup> Most of the times abnormal and fatal signs relating to palpation, examination of various part of the body could be observed.<sup>[18]</sup> Some of the fatal signs presence on the sense organs.<sup>[19]</sup> Prodromal sign of some disease conditions also may be fatal.<sup>[20]</sup> Life expectancy can be deduced from these fatal characteristics.<sup>[21]</sup> Thus, the physician is able to take the decision regarding the treatment of the patient.<sup>[22]</sup> This has shown that it is possible to detect fatal sings through the five senses as well.<sup>[23]</sup> Fatal signs of the *paittika* disorders also mentioned very clearly.<sup>[24]</sup> Some of the fatal signs indicating imminent death of the patient.<sup>[25]</sup> CarakaSamhita has mentioned the definition of the word *ariṣṭa*<sup>[26]</sup> Both texts have mentioned portentous signs of dreams and dreams indicating imminent death.<sup>[27]</sup> In addition *CarakaSamhitā* has mentioned cause and types of dreams and fruitless and otherwise dreams.<sup>[28]</sup>

Signs indicating recovery of the patient have been included in both texts.<sup>[29]</sup> They are similar. *Sārārthasangraha* has mentioned *Vaidya Catuṣpāda*. Then qualities of physician, drugs, attendant and patients have been mentioned.<sup>[3]</sup> In addition important of physician, qualified Physicians and quacks and fourfold attitude of the physician have been included.<sup>[30]</sup> Further more six *rasas*, characters of six *rasas* and their effect on *doṣas* have included in *Sārārthasangraha*.<sup>[31]</sup>

## II Tridosha Theory

Three *doṣa*, characters of *doṣa*, types of *doṣa*, causes for aggravation of *doṣa*, location of *doṣa*, eighty types of *vātika* disorders, forty types of *paittika* disorders, twenty types of *kaphaja* disorders. Alleviation of three *doṣa* and management of *doṣa* have been mentioned in *Sārārthasangraha*.<sup>[3]</sup> These all things have been included in *CarakaSamhitā* also. Then, Properties and alleviation of *doṣa* mentioned in both texts.<sup>[32]</sup> Abnormal and normal functions of *tridoṣa* were stated clearly.<sup>[33]</sup> Then it was mentioned characters of aggravated and diminished normal *doṣa*<sup>[34]</sup> it has mentioned normal function of *tridoṣa*, characters of their aggravation and diminution very deeply.<sup>[35]</sup> management of *doṣa* also discussed in detail.<sup>[36]</sup> Further types of *vātaja*, *pittaja*, and *kaphaja* types of diseases and characters effects and treatment of *tridoṣa* have also been mentioned.<sup>[37]</sup>

### III. Theory of Rasa and Guna

*CarakaSamhitā* also has mentioned definition, composition of *rasa* and there effect on *doṣās*.<sup>[31]</sup> In addition to that sixty three variations of *rasa* and *anu rasa*, evaluation of *rasas*, properties, actions and disorders caused by their excessive use, knowledge of properties and action of drugs on the basic of *rasa*, three degrees of *rasa* in relation to six prominent *gunas* and characters of six *rasa* have been included.

Both texts have mentioned three types *doṣa* <sup>[3]</sup>. *CarakaSamhita* has mentioned many features of those. *SārārthaSangrahaya*,<sup>[38]</sup> it has mentioned in briefly.

Genesis of diseases due to time factors related with *doṣa* have mentioned in both texts. They have mentioned that according to seasons, time of digestion of food, three divisions of the day and age.

### IV. Three Guna

*SārārthaSangrahaya* has mentioned brief description about *sattva*. But *CarakaSamhitā* has mentioned three types of *sattva*<sup>[3]</sup> and seven types of *Śuddhasattva*, six types of *rājasasattva*, three types of *tāmasasattva*.<sup>[39]</sup>

### IV. Agni

Both texts have mentioned about four types of *agni* combined with *tridoṣas*.<sup>[3][40]</sup> As well as under the *grahanicikitsā*, *CarakaSamhitā* has mentioned important of *agni*, physiology of digestion, *bhūtāgni*, *dhātvaṅni*, causes of derangement of *agni* and food poisoning with symptoms.<sup>[41]</sup>

### V. Ama

*SārārthaSangrahaya* has mentioned about *āma* in briefly<sup>[3]</sup> and *CarakaSamhitā* has mentioned causes for *āma* and management of *āma*.<sup>[42]</sup>

### VI. Pancha Nidana

*SārārthaSangrahaya* has explained *Nidāna Lakṣana* and *Pūrvarūpa Lakṣana*<sup>[3]</sup> then *Caraka Samhitā* also mentioned about that<sup>[43]</sup>. in addition *Caraka Samhitā* has mentioned synonyms and types of *Nidāna*.

### VII. Vyādhi

*Sārārtha Sangrahaya* has mentioned about *vyādhi* then it has mentioned *vyādhi* is 4 types. They are *Śārīrika*, *mānasika*, *āgantuka andsahaja* <sup>[3]</sup>*CarakaSamhitā* has mentioned 2 types of *vyādhi*. They are *Śārīrika*, *mānasika* and synonyms for *vyādhi*.<sup>[44]</sup>

### VIII. Seasons

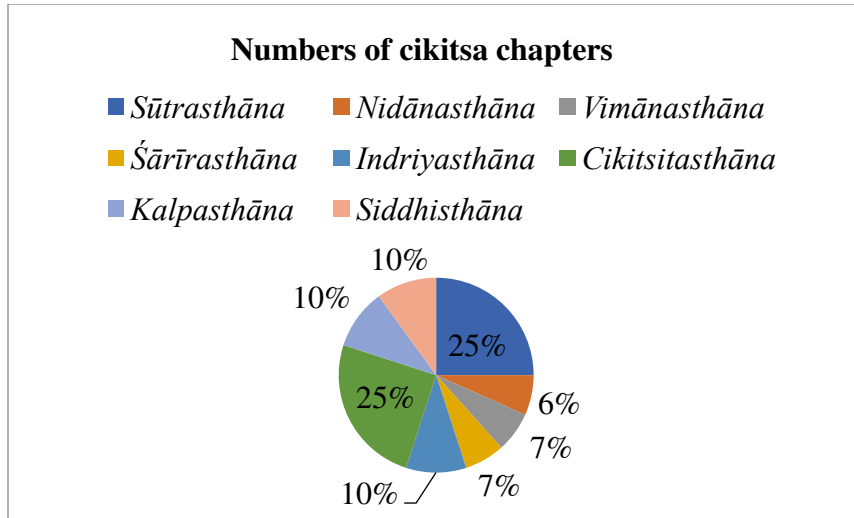
Six seasons have been mentioned in *SārārthaSangrahaya* <sup>[3]</sup> But in *CarakaSaṃhitā* not only six seasons, division of seasons, receiving and releasing periods, mode of living different seasons have been mentioned.<sup>[45]</sup>

### Cikitsā

**Table 3: Difference between *cikitsasthana***

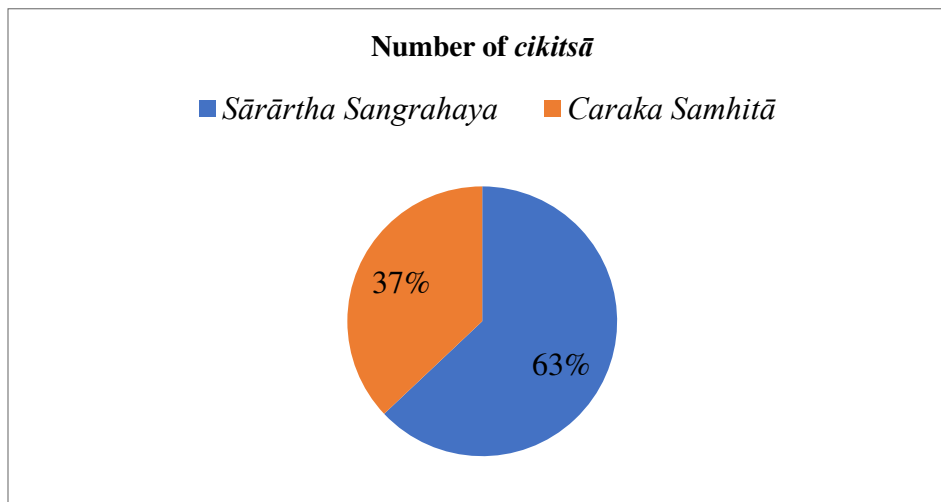
<p>The <i>cikitsā</i> that have been mentioned in both texts</p>	<p>The <i>cikitsā</i> that has been only mentioned in <i>sārārthsangrahaya</i> (not mentioned on <i>cikitsasthana</i> of <i>carakasamhitā</i>.)</p>
<p><i>Dravyagaṇacikitsā, Annapānacikitsā, Garbhiṅīcikitsā, Kumāracikitsā, Śīrorogacikitsa, Akṣīrogacikitsa, kaṇṇrogacikitsa, graṇrogacikitsa, Mukharogacikitsa, Jvaracikitsa, Atīsāracikitsa, Grahanicikitsa, Raktapittacikitsa, Kshayarogacikitsa (Rajyakshmacikitsa), Urahṣatacikitsā, Unmade cikitsa, Apasmaracikitsa, Hikkaswasacikitsa, Kasacikitsaita, Chardicikitsa, Trṣṇācikitsā, Hṛdrogacikitsā, Āmaagnimāndyādicikitsā, Vidradhicikitsa, Kushtarogacikitsa, Gulmacikita, Udaracikitsa, Pramehacikitsa, Mutrakrucchacikitsa, Mulavyadhicikitsa(arshacikitsā), Udāvartacikitsā, VātavyādhiPāndurogacikitsā, VātaṢoṇitacikitsā (vātaraktacikitsā), Śoṭhacikitsā (Śvayathucikitsā), Ślīpadacikitsā, Visarpacikitsā, Vraṇarogacikitsā (divvraṇaccikitsā), Strirogacikitsā (yoni vyāpatcikitsā), Sirāvyadhacikitsa, Viṣacikitsā, Rasāyanacikitsā, Vājīkaraṇacikitsā</i></p>	<p><i>Jvaraviṣyaka rasa cikitsā, Nākṣatrikajvaracikitsā, Upadaṃścikitsā, Kṣudrarogacikitsā, Bhagnacikitsā, Sāmānyavidhicikitsā, Śalyacikitsā</i></p>

**Figure 1: Percentage of cikitsa chapters of CarakaSamhitā**



- ❑ *Sūtrasthāna, Nidānasthāna, Vimānasthāna, Śārīrasthāna, Indriyasthāna, Cikitsitasthāna, Kalpasthāna and Siddhisthāna* are the sections of *carakasamhitā*.
- ❑ Among these sections, *Sūtrasthāna* and *Cikitsitasthāna* take most places in *CarakaSamhitā*. It is 25%.
- ❑ Next most place take *Indriyasthāna, Kalpasthāna, and Siddhisthāna*. They take equal places in *CarakaSamhitā*. It is 10%.
- ❑ Least place takes *Nidānasthāna, Vimānasthāna, and Śārīrasthāna*. They take equal places in *CarakaSamhitā*. It is 7%.

**Figure 2: Ckitsā chapters of both texts**



- Under the *cikitsā*,
  - *SārārthaSangrahaya* has mentioned 51 *cikitsā*.
  - *CarakaSaṃhitā* has mentioned 30 *cikitsā* in *cikitsitasthāna*.
- Among the *cikitsā* chapters, most *cikitsā* chapters present in *SārārthaSangrahaya*.
- But in addition to *Cikitsitasthāna*, *CarakaSaṃhitā* has mentioned *cikitsā* in other chapters.
- *SārārthaSangrahaya* has mentioned more than one *cikitsā* in same chapter.

Same *cikitsā* have mentioned in both texts. But names of chapters are different. Following table shows that *cikitsā*.

**Table 3: Difference between names of *cikitsā***

<i>SārārthaSangrahaya</i>	<i>CarakaSaṃhitā</i>
<i>Kṣayarogacikitsā</i>	<i>Rājajakshmacikitsā</i>
<i>VātaŚonitacikitā</i>	<i>Vātaraktacikitsā</i>
<i>Śothacikitsā</i>	<i>Śvayathucikitsā</i>
<i>Vraṇacikitsā</i>	<i>Dvivraṇacikitsā</i>
<i>Mūlavyādhicikitsā</i>	<i>Arśascikitsā</i>
<i>Strirogacikitsā</i>	<i>Yoni Vypath</i>

## CONCLUSION

- *CarakaSaṃhitā* is older than *SārārthaSangraya*.
- *CarakaSaṃhitā* has translated into many languages and it has many commentaries. But *SārārthaSangrahaya* has translated into Sinhala and it`s commentaries have not mentioned.
- *SārārthaSangrahaya* has mainly based on *cikitsā* and *CarakaSaṃhithā* has based on fundamentals, diagnosis, specific features, and study of human body, therapeutics, pharmaceuticals and successful management.
- *CarakaSaṃhitā* mainly mentioned about kaya *cikitsā* and it has not mentioned about shalya.
- Both texts have same things as well as different things.
- Sararthisangrahaya has mentioned all things in briefly. But charakasamhita has mentioned in widely.

- Most probably sararthasangraha has described etiology, types, prognosis and treatments in chikitsa. But charakasamhita in addition to above them,so many things have described.
- In sararthasangraha one thing has been mentioned in one place, but charakasamhita not like that. Some things has mentioned in different sections.
- Sararthasangraha is a combination of another ayurveda books.

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## A CRITICAL REVIEW ON THE CONCEPT OF FOOD DIGESTION IN AYURVEDA WITH MODERN COMPARISON

K. M. Jansz

### ABSTRACT

Ayurveda is one of the oldest medical systems that expound on the holistic approach originated in India. *Ācārya Caraka* included food among the *Trayopstambha* (three pillars of life) which sustain the body, mind, and soul in equilibrium. He emphasizes the wholesome and unwholesomeness of food as the distinction between health and disease. *Agni* and *Pitta Doṣa* play a crucial role in Ayurveda's digestion concept. One of the prominent roles of *Agni* is to disintegrate food into its simplest possible components for absorption and utilization. This action corresponds to the functions performed by varieties of enzymes. This study aims to evaluate the process of digestion in Ayurveda and modern medicine and rationally justify in parlance the mechanisms that assist the digestion process explained in contemporary physiology. The study was conducted as a literature review, and the data were collected from authentic Ayurveda classics and referring to online articles published on *PubMed*, *ScienceDirect*, etc. *Ācārya Caraka* states digestion of a food bolus that enters the mouth commences at the oral cavity; it gets softened by *Bodhaka Kapha*, drawn into *Koṣṭha* by *Prāna Vāyu*, and digested by *Agni*. After *Bhūtāgnipāka*, these metabolites are rendered fit for absorption. *Dhātvāgni* converts the *Poṣya Dhātu* into *Poṣaka Dhātu* in respective *Dhātuvahā Srotas* and distributes it with the help of *Vyāna Vāyu*. *Cakrapāni Datta* defines *Jaṭharāgni Pāka* as proceeding in two phases, *Avasthāpāka* and *Vipāka*, and *Avasthāpāka* is divided into three stages, namely *Madhura*, *Amla*, and *Katu*. In the parlance of modern physiology, these three stages suggest salivary digestion of polysaccharides, proteins, and fats and absorption of the remaining water and salts while converting them into feces and gas, respectively. Thus, food digestion in Ayurveda can be rationally justified in parlance with the mechanisms that assist the process of digestion explained in modern physiology.

**Keywords:** Ayurveda, *Agni*, *Avasthāpāka*, *Dhātu*, food digestion process, modern physiology, *Trayopstambha*

## INTRODUCTION

Ayurveda is one of the oldest medical systems that expound on the holistic approach originated in India. It comprises a dynamic and unbroken knowledge tradition spanning over five millennia on assorted aspects of managing health and wellbeing, written mainly in Sanskrit.<sup>[1]</sup> Ayurveda is considered not only a concise medical system but also a way of life.<sup>[2]</sup> Food plays a prime role in the maintenance of health. *Ācārya Caraka* included food among the *Trayopstambha* (three pillars of life), which sustain the body, mind, and soul in equilibrium.<sup>[3]</sup> Food is a vital portion of all living beings in the world. Clearness of mind, complexion, understanding, good voice, longevity, ease and contentedness, strength, growth, and intelligence depend upon food.<sup>[4]</sup> *Ācārya Caraka* emphasizes the importance of food as the distinction between ease and disease arises from wholesome nutrition or the lack of it.<sup>[5]</sup> The *Āhāra* enhances vitality and strength and makes the body sturdy. Food increases enthusiasm, memory, *Agni*, *Āyu*, *Teja*, and *Ojas*. Consumption of *Sātvika Āhara* (wholesome) makes the mind void. When the mind is devoid of fault, memory power augments. *Agni*, a fundamental concept deeply rooted in ancient Indian philosophy and Vedic literature, holds a significant place in the understanding of the natural and cosmic order. The ancient Vedic texts, including the Rigveda, Atharvaveda, and Yajurveda, contain hymns dedicated to *Agni*, emphasizing its central role in cosmic harmony and human existence. *Agni* in Ayurveda, is reflected in the concept of *Pitta* in the body. It refers to burn/ heat in Sanskrit.<sup>[6]</sup> Therefore, *Pitta* has been described as *Agni* since it performs fire-like actions i.e. *Pāka*, which refers to *Pacana* (digestion), *Dahana* (burning), *Bhinna Samghāta* (splitting), *Tapana* (heat production), *Prakāśana* (illumination), *Ranjana* (colouration) and *Prabhākarana* (to cause lustre). The implication of *Pitta-Vyāpāra* are digestion of food and its transformation into various functional and structural factors of the body.<sup>[7]</sup>

From allied scientific perspective, Ayurveda concepts of digestion align with the understanding of the gastrointestinal system. The digestive process involves the mechanical and chemical breakdown of food in the stomach and intestines, where enzymes and gastric juices aid in nutrient absorption. This process converts food into energy and essential nutrients for bodily functions. In recent years, scientific research has highlighted the crucial role of gut microbiota in the digestive process. The trillions of microorganisms residing in the gut play a pivotal role in breaking down certain food components and assisting in nutrient absorption. This complex ecosystems of bacteria, fungi, and other microorganisms have a profound impact on digestion, metabolism, and overall health, echoing the Ayurveda emphasis on the importance of a balanced digestive system. Moreover, Ayurveda recognizes the connection between the mind and GIT (Gastrointestinal Tract), as emotions and mental states can influence digestion. This is analogous to the modern understanding of the mind-gut axis, where emotional stress and psychological factors can affect gastrointestinal function. Research in psychoneuroimmunology has shown that stress can disrupt gut function, leading to symptoms such as indigestion, bloating, irritable bowel syndrome etc.<sup>[8]</sup> Therefore, this study aims to discuss the rationality in comparison of the Ayurveda and modern mechanisms that assist the process of digestion by evaluating the process of digestion in Ayurveda and modern literature and comparing the mechanisms that underlie in them.

## METHODOLOGY

In this study, Ayurveda classics were critically analyzed by manually searching all the *Śloka* from various *Sthāna* on food digestion, viz. factors involved in digestion, stages of digestion, *Doṣa* involved in digestion, the process of digestion, end products of digestion, the

role of *Agni*. Further, the modern medical literature on food digestion was analyzed. The primary Ayurveda texts used in the present study are *Caraka Saṃhitā*, *Suśrta Saṃhitā*, and *Aṣṭāṅgahṛdaya Saṃhitā* with commentaries on them.

Electronic databases such as *Google Scholar*, *PubMed*, and *ScienceDirect* were searched for relevant articles using food digestion, Ayurveda, modern physiology, etc.

## RESULTS

To comprehend the concept of digestion in Ayurveda, we must first recognize the role of *Agni* and its relation to *Pitta Doṣa*. *Agni* plays a significant role in the food digestion process, and our *Ācārya* often relates its action to *Pitta Doṣa* and vice-versa. Therefore, to perceive the conceptual basis of *Agni* and *Pitta Doṣa*, let's first visualize *Agni's* role in food digestion.

### *Role of Agni*

Food nourishes the body and tissues, which is why *Ojas* (vital essence, immunity), strength, and complexion. But in effect, the *Agni* (digestive power) plays a crucial role in this connection because tissue elements like *Rasa*, etc., can not even originate from undigested food particles if *Agni* is not present.

As described in *Agni Purāna*, the fundamental difference between physical and biological *Agni* is that the latter is associated with living beings.<sup>[9]</sup> *Agni* at the physiochemical level is responsible for the decomposition, acceleration, and disintegration of various chemical reactions occurring naturally. Similarly, the primary purpose of *Agni* in the body is to break down or disintegrate the food into its simplest possible components for absorption and utilization. Therefore, this function is termed digestion. Procedures such as *Dahana*, *Pacana*, etc., of *Agni* correspond to the tasks performed by various biological substances known as enzymes.<sup>[10]</sup>

The *Agni* alone, located in *Pitta Doṣa*, gives rise to beneficial or harmful responses according to its routine or abnormal status. The type of *Pitta* responsible for digestion is *Pācaka Pitta*.<sup>[11]</sup> *Cakrapāni Datta* enumerates thirteen *Agni* among which *Jaṭharāgni* plays important role in the regulation of five *Bhutāgni* and seven *Dhātāvāgni*. The efficient conduct of *Jaṭharāgni Pāka* results in the conversion of complex food substances into their elemental forms which are separated from the undigested fraction. The former is taken up for further chemical reactions before they are rendered fit for metabolic reactions. A further reference to this *Pāka*, would appear to be necessary, before preceding to an appraisal of *Bhutāgni* and *Dhātāvāgni Pāka*. The six *Rasa* mentioned per Ayurveda undergoes its own physical and chemical change upon action by *Jaṭharāgni Pāka*. In the school of *Caraka*, emergence of *Vipāka* are stated as *Madhura*, *Amla* and *Katu* but *Ācārya Suśrta* opines *Madhura* and *Katu*. *Ācārya Vāgbhatta* follows the former school in his treatises. A deep analysis on this by *Ācārya Gangādhara* suggests that *Caraka's* views on *Vipāka* are based on the *Rasa* of *Dravya* whereas *Suśrta's* school of thought, *Vipāka* are depends upon the alignment of *Pañcamahābhūta*. The status of *Jaṭharāgni* is responsible for health and disease. Its proper maintenance bestows longevity, complexion, enthusiasm, built *Ojas*, *Tejas*, power to other *Agni* (*Bhūtāgni* and *Dhātāvāgni*), etc.<sup>[12]</sup> The *Agni* plays a vital role in this connection because *Dhātu* (tissue elements) like *Rasa*, *Rakta*, etc., cannot even originate from undigested food particles.<sup>[13]</sup> Therefore, the role of *Agni* is central to every action performed in the body, as it provides necessary *Bala* (energy) widespread. Further, let's contrast the basis of the food digestion process and comprehend its attributes concerning modern.

### Process of Digestion

According to Ayurveda, the digestion of a food bolus that enters the mouth commences in the oral cavity. This food bolus gets softened by the stimulation of *Bodhaka Kapha* (one type of *Kapha Doṣa*), after which it gets split into small particles by the liquid (saliva). *Ācārya Caraka* states that *Prāna Vāyu* (one type of *Vāta Doṣa*) draws the ingested food into the *Koṣṭha* (stomach). After that, the *Agni* located in the *Koṣṭha* gets stimulated by *Samāna Vāyu* (one type of *Vāta Doṣa*). This *Agni* stimulated by *Samāna Vāyu* aids in the digestion of food of appropriate quantity taken in the required amount and at the right time to promote longevity. Just as a fire put below a cooking pot filled with rice and water assists in preparing rice, so does the *Agni* helps in the digestion of food in the stomach.<sup>[14]</sup> At the level of the stomach and intestine, the food received into the stomach gets broken down into minute particles, which further get divided into *Sāra Bhāga* (essence part), which goes to nourish all the body tissues, and *Kitta Bhāga* (which goes on to form all waste products of the body) like feces, urine, and sweat. This *Sāra Bhāga* is termed as *Annarasa* and is acted upon by *Panca Bhūthāgni* which separates *Vijātīya Dravya/ Annarasa* and converts into absorbable *Sajātīya Dravya/ Annarasa*. These *Dravya* are then carried out to nourish the seven *Dhātu* (tissues) in their respective *Srotas* (channel system) with the help of *Vyāna Vāyu*, and their respective *Dhātvāgni* converts the *Poṣya Dhātu* (unstable forms) into *Poṣaka Dhātu* (stable states). As a result of this conversion, respective *Dhātu* is formed in each of these *Srotas* for that particular *Dhātu*.

As per Ayurveda, there are seven types of tissues in the body called *Dhātu*. They are,

1. *Rasa Dhātu* (essence part of food, also compared with plasma and lymph )
2. *Rakta Dhātu* (blood tissue)
3. *Māmsa Dhātu* (muscle tissue)
4. *Medas Dhātu* (fat tissue)
5. *Asti Dhātu* (bone tissue)
6. *Majjā Dhātu* (bone marrow tissue)
7. *Śukra Dhātu* (male and female reproductive systems)

These body tissues get nourished in the following manner. The essential part of food/ *Anna Rasa* nourishes *Rasa Dhātu*; from there on, each *Dhātu* nourishes the next *Dhātu* successively. Each *Dhātu* has its own *Dhātvāgni* (digestive fire at the tissue level). The *Dhātvāgni* converts the nourishment that it receives into its respective tissue.

1. *Rasa Dhātu* has *Rasa Dhātvāgni* - The digested food is processed by *Rasa Dhātvāgni*, to nourish *Rasa Dhātu*. Then the remnant food part flows to *Rakta Dhātu*.
2. *Rakta Dhātu* has *Rakta Dhātvāgni* - The remnant digested food that flows into *Rakta Dhātu* gets digested and absorbed by the *Rakta Dhātvāgni* to nourish the *Rakta* (blood tissue).
3. *Māmsa Dhātvāgni* - The remnant digested food that flows into *Māmsa Dhātu* gets digested and absorbed by *Māmsa Dhātvāgni* to nourish *Māmsa Datu* (muscle tissue). The remaining digested food flows into *Medas Dhātu* (fat tissue).
4. *Medas Dhātvāgni* - The remnant digested food that flows into *Medas Dhātu* gets digested and absorbed by *Medas Dhātvāgni* to nourish *Medas Dhātu* (fat tissue).
5. *Asti Dhātvāgni* - The remnant digested food that flows into *Asti Dhātu* gets digested and absorbed by *Asti Dhātvāgni* to nourish *Asti Dhātu* (bone tissue). The remaining digested food flows into *Majjā Dhātu* (bone marrow).



6. *Majjā Dhātvāgni* - *Majjā Dhātu* has *Majjā Dhātvāgni*. The remnant digested food that flows into *Majjā Dhātu* gets digested and absorbed by *Majjā Dhātvāgni* to nourish *Majjā* (bone marrow). The remaining digested food flows into *Śukra Dhātu* (reproductive system).
7. *Śukra Dhātvāgni* - The remnant digested food that flows into *Śukra Dhātu* (reproductive system) gets digested and absorbed by *Śukra Dhātvāgni*.

Thus, from *Rasa* to *Śukra*, all the seven *Dhātus* get nourished respectively by one another, with the help of respective *Dhātvāgni* (digestive fire component of individual tissue).

The waste products are formed in the following manner. Food, after digestion, takes two forms viz, *Prasāda* (the essence part), discussed previously. *Kitta* (waste part), the waste part further manifest, *Sveda* (sweat), *Mūtra* (urine), *Purīṣa* (stools), *Tridoṣa* (*Vāta*, *Pitta*, *Kapha*), excreta of the ear, eye, nose, mouth, hair follicles, and genitals organs, also *Keśa* (hair of the head), *Śmṣru* (beard), *Loma* (small hair strands of the body), *Nakha* (nails), etc. This process is further illustrated by the following Table I.

**Table I - The scheme depicting different steps in *Dhātvāgni Pāka* and their respective products**

Part subjected to specific <i>Agni</i>	Responsible <i>Agni</i> type	<i>Prasāda Bhāga</i>				<i>Kitta Bhāga</i>
		<i>Sthūla/ Sthāyī Dhātu</i>		<i>Sūkṣma/ Asthāyī Dhātu</i>		
		Ayurveda	Modern Correlation	<i>Upadhātu</i>	<i>Sadarmāmsa</i>	
<i>Annarasa</i>	<i>Rasa Dhātvāgni</i>	<i>Rasa Dhātu</i>	Plasma, Tissue fluid, Lymph	<i>Stanya</i> (breast milk), <i>Ārtava</i> (menstrual blood)	<i>Rakta Sadarmāmsa</i>	<i>Kapha</i>
<i>Rakta Sadarmāmsa</i>	<i>Rakta Dhātvāgni</i>	<i>Rakta Dhātu</i>	Constituents of Blood	<i>Sirā</i> (blood vessels, veins), <i>Kaṇḍarā</i> (tendons)	<i>Māmsa Sadarmāmsa</i>	<i>Pitta</i>
<i>Māmsa Sadarmāmsa</i>	<i>Māmsa Dhātvāgni</i>	<i>Māmsa Dhātu</i>	Muscle	<i>Vasā</i> (muscle fat), <i>Tvak</i> (skin)	<i>Medas Sadarmāmsa</i>	<i>Karṇa Mala</i> (ear wax), <i>Netra Mala</i> (eye discharges), <i>Nasa Mala</i> (nasal discharges), <i>Roma Kūpa Mala</i>

						(sebum), <i>Prajanana Mala</i> (smegma)
<i>Medas Sadarmāmsa</i>	<i>Medas Dhātvāgni</i>	<i>Medas Dhātu</i>	Adipose Tissue, other lipid containing structures	<i>Snāyu</i> (ligaments )	<i>Asthi Sadarmāmsa</i>	<i>Sveda</i> (sweat)
<i>Asthi Sadarmāmsa</i>	<i>Asthi Dhātvāgni</i>	<i>Asthi Dhātu</i>	Bones, Cartilages	-	<i>Majjā Sadarmāmsa</i>	<i>Nakha</i> (nails), <i>Loma</i> (body hair), <i>Smaṣru</i> (beard)
<i>Majjā Sadarmāmsa</i>	<i>Majjā Dhātvāgni</i>	<i>Majjā Dhātu</i>	Yellow & Red bone marrow	-	<i>Śukra Sadarmāmsa</i>	<i>Tvak Sneha</i> (sebaceous secretions), <i>Vit Sneha</i> (mucus of faeces), <i>Akṣi Sneha</i> (thick secretions from eye)
<i>Śukra Sadarmāmsa</i>	<i>Śukra Dhātvāgni</i>	<i>Śukra Dhātu</i>	Male & Female reproductive elements	<i>Ojas</i> (immunity )	-	-

*Jaṭharāgni Pāka* (digestion of food in the GIT) has been narrated in two phases as *Prapāka* (*Avasthāpāka*) and *Vipāka*. *Cakrapāni Datta* defined the term ‘*Prapāka*’ as *Prathama Pāka* (the first change) and, on the other hand, has termed ‘*Vipāka*’ as the final state of food after digestion. *Prapāka* again sustains three changes, namely *Madhura Avasthāpāka*, *Amla Avasthāpāka*, and *Katu Avasthāpāka*, under the influence of *Jaṭharāgni*.<sup>[15]</sup> To understand the causality behind the initiation of digestion, let’s visualize the first step of the three phases of digestion according to Ayurveda.

### ***Avasthāpāka (Prapāka)***

#### ***Madhura Avasthāpāka***

The first phase of digestion begins when food enters the buccal cavity. *Madhura Rasa* comprehends this stage of digestion in the upper portion of GIT. Food consisting of six tastes

takes three hours in this stage of digestion. At this stage, *Prthivi* and *Āp Bhūta Dravya* are digested initially. This fraction of digestion, under the influence of *Bodhaka Kapha*, is completed as it reaches the stomach. In this phase, *Kapha Doṣa* is secreted, and the food is made soft; this aggravation makes the person inactive, sluggish, and satisfied.<sup>[16]</sup> The propulsion of food from the mouth to the stomach is brought by *Prāna Vāyu*, which according to *Ācārya Caraka*, is also responsible for *Śīvana* (the spitting of saliva), *Āhara Karma* (deglutition or the act of swallowing), *Kṣavathu* (sneezing), *Udgāra* (belching) and respiration.<sup>[17]</sup> (refer Figure I) In the parlance of modern physiology, this stage of digestion is suggestive of salivary digestion, which will be completed in the stomach where the insoluble polysaccharides such as starch are converted to soluble dextrin by ptyalin (salivary amylase). When food is chewed, it mixes with saliva (ptyalin), which hydrolyses starch into the disaccharide maltose and other small polymers of glucose that contain 3 to 9 glucose molecules. The action of *Bodhaka Kapha* parallels the description of saliva secreted by the salivary glands (i.e., enzyme ptyalin). Thus, the activity of *Bodhaka Kapha* on food leads to *Madhura Rasa* in the mouth.<sup>[18]</sup> (refer Figure II)

### ***Amla Avasthāpāka***

*Madhura Avasthāpāka* is brought to an end at the *Pacyamānāśya* and proceeds to the phase of *Amala Avasthāpāka*. It would seem that the *Vidagdha Āhāra* (partially digested food) from the *Āmashaya*, *Amla in Rasa*, stimulates the humoral mechanism to discharge *Accha Pitta* (union of bile juice and pancreatic juice) into it. *Cakrapāni Datta* and *Gangādhara* have interpreted the term 'Accha' as *Aghana* (thin) and *Svaca* (clear). Food bides for around six hours in this stage. Aggravation of *Pitta Doṣa* stimulates the conversion of *Āgneya Bhūta Dravya*, and the person feels a hot sensation and becomes thirsty. The concept of *Accha Pitta* (union of bile juice and pancreatic juice) includes the bile and pancreatic secretions, which are responsible for the digestion of fats, proteins, and other carbohydrates.<sup>[19], [20]</sup> (refer Figure I)

In the parlance of modern physiology, the steps involved in the digestion of proteins and fats can be correlated to this stage. Protein digestion is regulated by the enzyme pepsin in the stomach (active at pH 2-3); it converts proteins to proteoses, peptones, and a few polypeptides. Mostly digestion occurs in the duodenum and jejunum in the presence of proteolytic enzymes from pancreatic secretions (chymotrypsin, trypsin, carboxypeptidase, etc.). Further digestion of peptides by peptidase occurs in the enterocytes, which finally leads to the formation of amino acids.<sup>[21], [22]</sup> Digestion of small amounts of fats occurs in the stomach by lingual lipase. The emulsification of fat aids in its digestion and absorption. Most of the emulsification begins at the duodenum in the presence of bile. It contains bile salts, phospholipids, lecithin, etc., which are extremely important for emulsification.<sup>[23], [24], [25]</sup> (refer Figure II)

### ***Katu Avasthāpāka***

The third aspect of *Avasthāpāka* is titled the *Katu Avasthāpāka*. This phase proceeds at the *Pakvāśaya* (large intestine). *Ācārya Caraka* has described that the *Kittāmsa* (the undigestible excretory portion of food) of *Anna* (residue) is dealt with here. He illustrates that the chyme passed down from the *Āmāśaya* to *Pakvāśaya* gets dehydrated by the *Agni Svarupa* of the *Pakvāśaya* and converted into chunks by the *Vāyu Svarupa* of the *Pakvāśaya*. This takes a bolus form resulting in *Katu Rasa* (acid pungent), stimulating the production of *Vāta* in the process.<sup>[26]</sup> Elaborating on this description, *Cakrapāni Datta* has observed the significant usage of the term *Śoṣaṇa* (absorption) instead of *Pacana* (digestion) by *Ācārya Caraka*. In his opinion, the former is related to the dehydration of the *Kittāmsa* of *Anna*, which has been pushed to



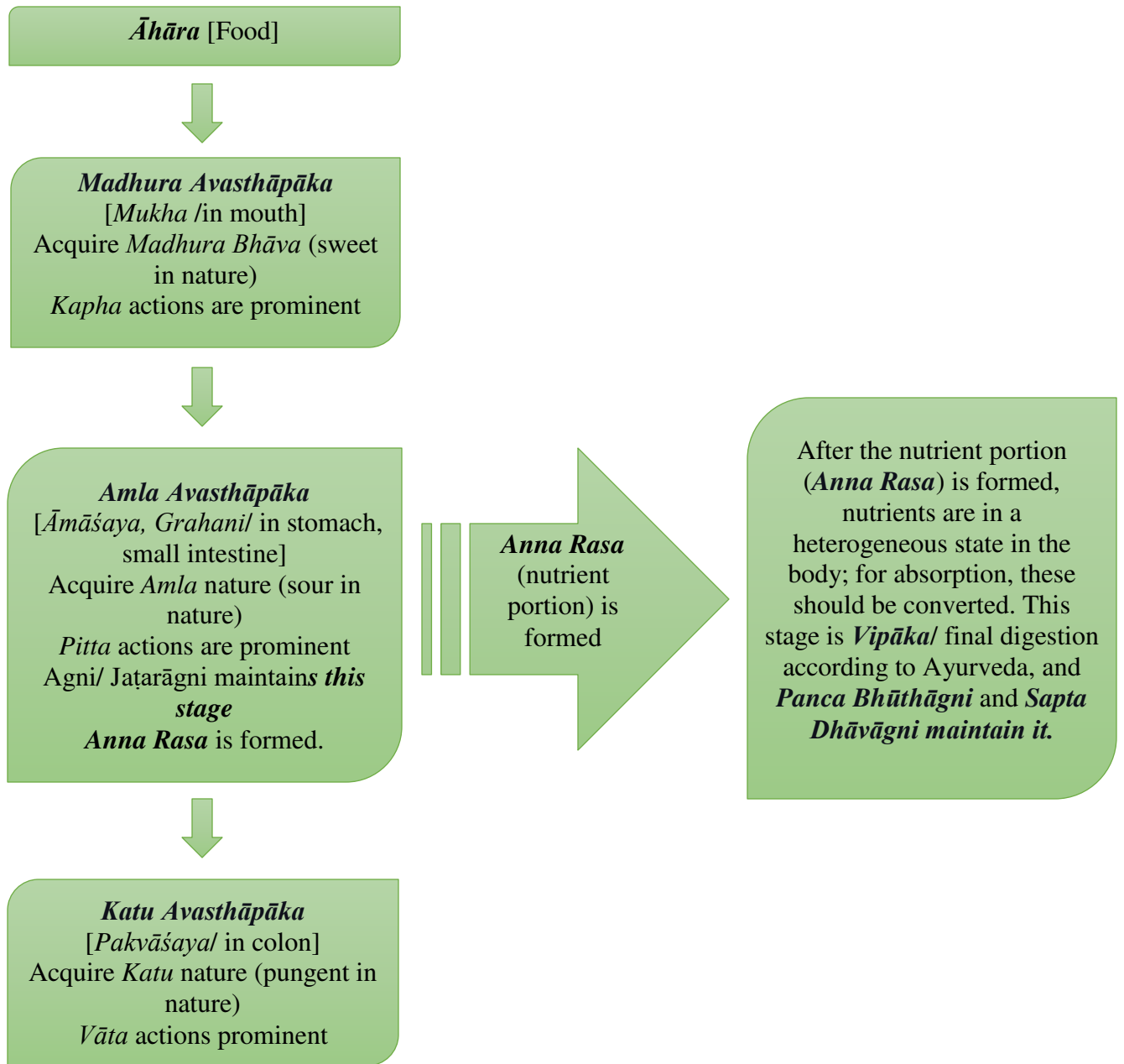
the *Pakvāsaya*. In contrast, the latter refers to the digestion of food in the *Āmāsaya* by *Agni*. Usage of the phrase '*Pari Pindita Pakvāsaya*' symbolizes the process of the formation of chunks of fecal matter. Also, '*Vāyusyāt Katubhāvataḥ*' defines the resulting pungent taste that stimulates the production of *Vāta*.<sup>[27], [28]</sup> (refer Figure I)

In modern physiology parlance, digestion is completed with the passing of contents in the small intestine; as the residue moves to the large intestine, absorption of remaining nutrients is complete. In the large intestine, the remaining amounts of water and salts are absorbed, and the remaining matter is then converted to feces which is ejected from the body. A nidus of a sizeable bacterial flora is found in the large intestine, to which *Escherichia coli* is typically the predominant microbe. These microbes are indirectly involved in the alteration of the effect of the products derived from protein digestion. They are considered a putrefaction flora that amplifies the purifications of the residual proteins and emission of various kinds of gases that are pungent and often foul odors, such as hydrogen sulfide, indole, ammonia, and phenol. (refer Figure II) This aforementioned modern correlation is laid out to establish and heighten the Ayurveda perspective of events in the GIT.<sup>[29]</sup> The process of food digestion as per Ayurveda is explained in the Figure I.

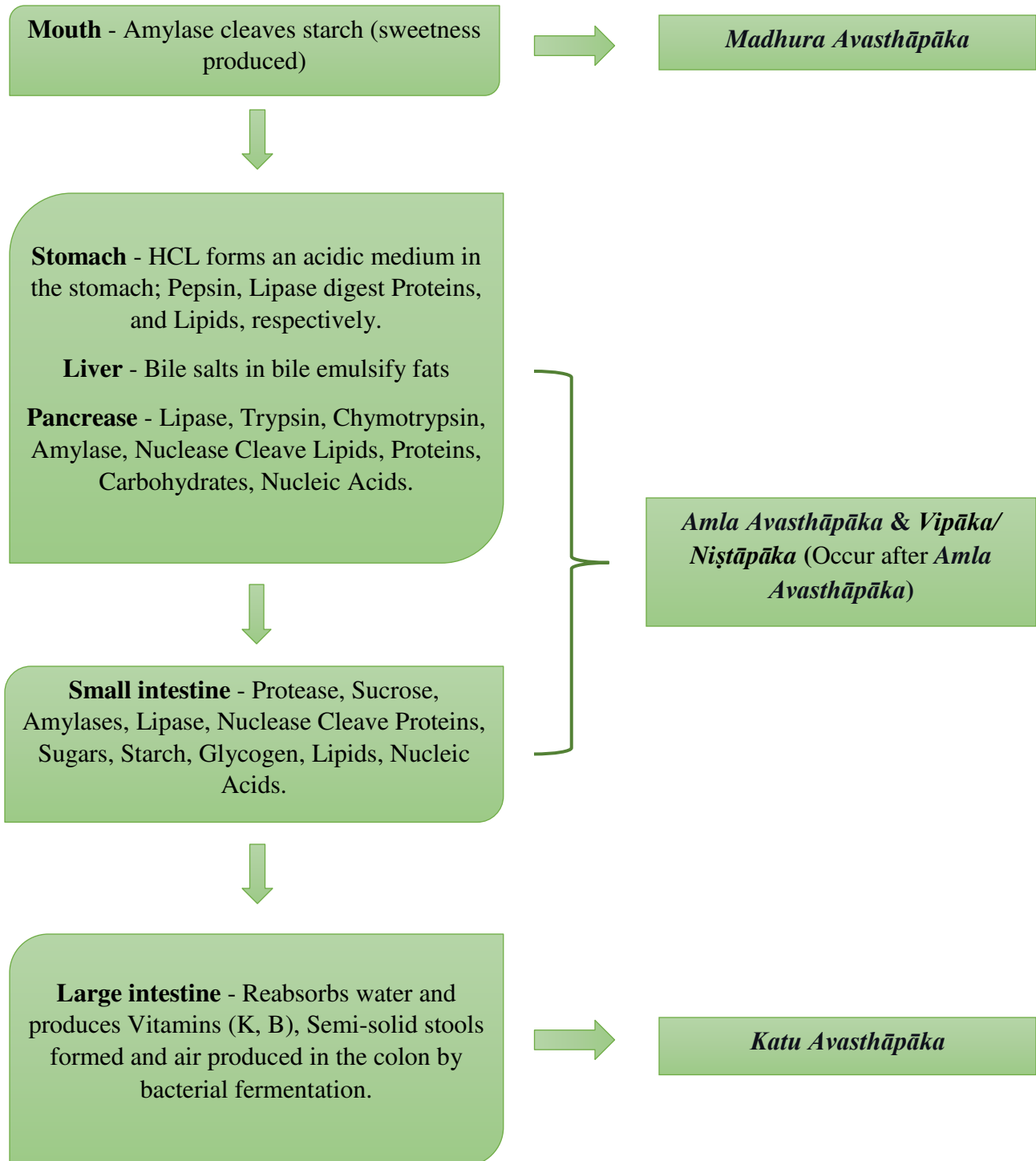
### **Vipāka**

*Vipāka* takes place depending upon the status of the ingested food. The ultimate, stable, and absorbable change in the *Rasa* emerge at digestion's end with the interaction of the *Jatharāgni*.<sup>[30]</sup> According to *Ācārya Caraka*, the six *Rasa* yield to three kinds of *Vipāka*, i.e., *Madhura Rasa* and *Lavaṇa Rasa* into *Madhura Vipāka*, *Amla Rasa* into *Amla Vipāka* and *Katu Rasa*, *Tikta Rasa* and *Kasaya Rasa* into *Katu Vipāka*. *Ācārya Suśrta*, on the other hand, brings out only two *Vipāka* *Madhura Vipāka* and *Katu Vipāka*.<sup>[31], [32]</sup> *Panca Bhūthāgni* respectively acts on each of these separated *Vijātīya Dravya/ Annarasa* and converts into absorbable *Sajātīya Dravya/ Annarasa*. These *Dravya* are carried out to nourish the seven *Dhātu* (tissues) in their respective *Srotas* (channel system) with the help of *Vyāna Vāyu*, and their respective *Dhātvāgni* converts the *Poṣya Dhātu* (unstable forms) into *Poṣaka Dhātu* (stable states). As a result of this conversion, respective *Dhātu* is formed in each of these *Srotas* for that particular *Dhātu*.<sup>[33]</sup> In the parlance of modern physiology, the absorbed nutrients are subjected to metabolism in the body. Glycogenesis (glucose metabolism) occurs in the muscle and other tissues, lipogenesis (conversion to fat) in the adipose tissue, synthesis of non-essential amino acids, etc.<sup>[34]</sup> Free fatty acid metabolism leads to the formation of androgens, estrogens, prostaglandin hormones, etc.<sup>[35]</sup> The amino acid metabolism forms plasma proteins, tissue proteins, immunoglobulins, hemoglobin, neurotransmitters, enzymes, biogenic amines, polyamines, ketone bodies, ammonia, urea, etc.<sup>[36]</sup> The process of food digestion according to the modern physiology with Ayurveda comparison is illustrated in the Figure II.

**Figure I - Process of food digestion According to the Ayurveda**



**Figure II - Process of food digestion According to the Modern Physiology with Ayurveda Comparison**



## DISCUSSION

Food is one of the pillars of life which sustain equilibrium and shield the body against diseases.<sup>[3]</sup> A series of changes that the food encounter in the *Koṣṭha* is termed *Avasthāpāka*.<sup>[14]</sup> *Agni* is the principal agent responsible for *Pacana* (digestion) of the ingested food. In the *Madhura Avasthāpāka* (first phase of digestion), the food in the upper portion of the GIT attains *Madhura Rasa* by the action of ptyalin (salivary amylase) on polysaccharides such as starch.<sup>[16]</sup> These carbohydrates are broken into smaller molecules, such as glucose, and dextrin, fitting for absorption.

In the *Amla Avasthāpāka* (second phase of digestion), the food attains *Amla Rasa* with the release of *Accha Pitta*.<sup>[19], [20]</sup> This results in the formation of which is in the *Vidagdha* (partly digested food) state of food, in other words, acidified chyme formation in the stomach, pylorus, duodenum, jejunum, and ileum. This stage can be correlated to the digestion of proteins and fats, forming amino acids and free fatty acids.

In the *Katu Avasthāpāka* (third phase of digestion), the chyme passed down to the *Pakvāsaya* is dehydrated and converted into feces resulting in the production of *Vāyu*.<sup>[26]</sup> In parallel to modern physiology, absorption of water and salts occur in the large intestine, and feces' formation generates various kinds of pungent gases.

*Bhūtāgni*, empowered by the *Jatharāgni*, assist in the transformation of the *Vijātīya Dravya* into *Sajātīya Dravya*. After *Bhūtāgnipāka*, *Sadarmāmsa* relevant to nourish the respective *Dhātu* are carried in the respective *Srotas*. *Dhātāvāgnipāka* occurs in their respective *Srotas* while being converted into their respective *Poṣaka* (stable) state.<sup>[33]</sup> In every *Dhātāvāgnipāka*, *Prasādabhāga* and *Kittabhāga* are separated. *Prasādabhāga* nourishes the body while *Kittabhāga* is expelled out as metabolic waste. These *Dravya* are either *Tulya* or *Vīṣita*, which cause an increase or decrease of the particular *Dhātu* due to their relevant properties which are potentially bestowed in them (properties which are homologous to the *Dhātu* cause sufficient or rapid increase). Thus, all the seven *Dhātu* are formed in their respective *Srotas* with the help of *Dhātāvāgni*, *Vyāna Vāyu*, and their respective *Sadarmāmsa*.

## CONCLUSION

In Ayurveda, the concept of digestion is elaborated descriptively, reaching from complex naked structures to the simplest minutest form. *Agni* is a crucial factor involved in this process. These structures vary from the food bolus we consume to the cellular/ tissue metabolites absorbed by the action of the respective *Agni*. The digestion of food in the *Āmāsaya* and *Pacyamānāsaya* results in the breaking of complex food elements into their more straightforward, minute, and absorbable forms (in terms of modern physiology, splitting of complex proteins into amino acids, fats into fatty acids, and glycerol, etc.). In this process, materials are broken down to their respective *Bhūta Dravya* (atomic/ molecular level) to be rendered fit for absorption. The modern parlance mentioned here is instead an insight into the comprehensive mechanism that underlies Ayurveda. Hence, an insight into food digestion in Ayurveda can rationally be justified in parlance with the mechanisms that assist the process of digestion explained in modern physiology.

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## IMPACT OF BUDDHISM ON SHAMANISTIC HEALING PRACTICES AMONG SINHALESE BUDDHISTS IN SRI LANKA

Priyanta Kumara Wendabona

### Abstract

One can see that the treatment of health problems has a dual nature from its very inception: knowledge about definite medical procedures and a belief in some magic or religious power. The persons who practice the latter kind of healing are popularly known as 'ritualists' or 'shamans'. The theory of disease causation of the Sinhalese is entirely based on the Āyurveda where it apprehends that the diseases are of three kinds: diseases caused by internal, external and mental factors. The external factors as explained in texts are, attacks by evil spirits, poisons, air, fire and the like and in order to heal them, the *mantra*, *tantra*, *yoga*, rituals and so on and some medicines are prescribed. Such patients are treated by numerous practitioners in Sri Lanka. Sri Lankans have adopted the term *Guptavidyā* for that healing system which correlates with the meaning of *Bhūtavidyā* in Āyurveda. Since Buddhism has a powerful impact on Sinhalese culture, the practice of traditional/indigenous/folk medicine among the Sinhalese Buddhists too shows much adherence to the Buddhist belief, while it nourished less by the influence of the healing traditions of Dravidian (Siddha), Muslim (Yunāni) and Christian. This paper presents an outline of the total ritualistic healing system of the Sinhalese. It also inquires into such issues as: the original form of indigenous healing system in Sri Lanka before the arrival of Buddhism; how it was nourished by the āyurvedic system and its adoptions and changes; to what extent is the ritualistic healing practice a global phenomenon and also among the Sinhalese; to what extent does Buddhism allow its followers to adhere to these kinds of practices; the extent of influence of Buddhist faith upon the faith healing among Sinhalese.

**Keywords :** Sinhalese, Buddhism, *Bhūtavidyā*, Shamanism, Rituals, Healing



## Introduction

Majority of the Sinhalese community in Sri Lanka follow Buddhism and a lesser number of people practice Christianity as their religion. We have taken the term 'Sinhalese Buddhists' into our account in a simple manner, as the people who identified themselves Sinhalese as their ethnicity and those Sinhalese who recognized Buddhism as their religion. And they are the focused community in this paper.

A noteworthy feature of the pre-Buddhist religion of Sri Lanka is that it was a mixture of the aboriginal cults and the beliefs of the Aryan newcomers. The worship of *yakṣas* and *yakṣaṇīs* (demons) was a widely prevalent aboriginal custom of pre-Buddhist Lanka<sup>[1]</sup>. The form of Buddhism which was introduced to and prevails still in Sri Lanka is generally known as '*Theravāda*' (orthodox).

In Sri Lanka, different types of health systems are available. Western allopathic medicine as well as South Asian āyurvedic medicine treatment are the state's free and universal health-care systems. In addition, there are a variety of private clinics offering Western and āyurvedic services, indigenous herbal specialists, and ritual healers. In general, people do not see these various health systems as mutually exclusive or contradictory, simultaneously accessing different them for the same or different types of ailments.

Indian impact on Sri Lankan culture, religion, language, medicine and the like was inseparable from the very ancient time to the present day. This impact, particularly the impact on the religion of almost all the Asian community is apparent. Indian health system, 'Āyurveda' is indeed in practice in Sri Lanka even today under the same term. Moreover, its one branch which is known as '*bhūtavidyā*' or '*gūptavidyā*' (the terms are equally used for a same system) is specific<sup>[2]</sup>. *Bhūtavidyā* is a complete major branch of Āyurveda which consists of the entire component such as etiology, pathology, diagnosis, preventive and curative methods related to the diseases caused by external factors. Thus, it is apparent how the system that Sri Lankan Buddhists practice under the banner of *bhūtavidyā* or at times *gūptavidyā* contains all those basics.

Belief of Sinhalese Buddhists regarding the illness (*leḍa/asanīpa/rōga/dōṣa*) seems to be much encircled by the āyurvedic opinion. They believe apart from the *vāta*, *pitta* and *kapha*, gods (*deviyō*), demons (*yakṣayō*), ghosts (*bhūtayō*), spirits (*pretayo*), planets (*grahayo*), one's own actions (*karmaya*) which is done in previous birth or in this life and natural phenomena such as wind, heat, cold and the like causes various types of diseases. Accordingly, the diseases also are identified by the Sinhalese Buddhists as *vāta-dōṣa*, *pit-dōṣa*, *sem-doṣa*, *dēva-dōṣa*, *yakṣa-dōṣa*, *prēta-dōṣa*, *graha-dōṣa*, *karma-dōṣa* and epidemics (*vasaṃgata*). *Vasaṃgata-rōgas* are traced back to the most divers causes such as *yakṣa*, *prēta*, *apala* (the bad influence of planets), from continuous drought with consequent famine, but most often from the gods as punishments for some offence. Further, there are some other diseases called *vas-dos* whose causes are the evil eye (*ās-vaha*), evil talk (*kaṭa-vaha*) or evil thoughts (*hō-vaha*)<sup>[3][4]</sup>. In the Sinhalese Buddhist notion of *bhūtavidyā* only *devas*, *yakṣas* and *prētas* are considered as disease causing agents. The rest of the *grahas/bhūtas* that Āyurveda counted such as *asura*, *gāndharva*, *rākṣasa* and others are not seen as disease causing factors among them.



## Methodology and Materials

This study is a historical, observational, exploratory and comparative one. Mainly the issues were addressed keeping in consonance the sociological and anthropological approach. During the course of research, healing practices among Sinhalese Buddhist community was examined from historical perspective and the contemporary practices were observed in field visits where the patients are healed by the methods related to *bhūtavidyā* in Sri Lanka. Further, a comparative approach was adopted to inspect the similarities and dissimilarities between Buddhist rituals and healing rituals.

### Practice of *Bhūtavidyā* as a Healing System among Sinhalese Buddhists

For a clear understanding of the practice of *bhūtavidyā* among the Sinhalese Buddhists it will be important to know the nature and structure of the religion of the Sinhalese in general and the Sinhalese Buddhism in particular. Sinhalese Buddhism, its structure and the direction of its change has always become a topic of hot debate among scholars in the fields of sociology, history, religion and anthropology. Some scholars, especially Ames, identify traditional religion as two distinct but related systems<sup>[5]</sup>. The first is the system of Buddhist worship which is concerned with sin, merit, rebirth and the salvation. The second which Ames names 'magical-animism', or the system which relates to the belief, worship and placation of deities, demons, spirits and ghosts is directed to the handling of everyday misfortunes and mental disturbances. But this distinction has been criticized by some other scholars such as Obeyesekere. According to Obeyesekere, Sinhalese Buddhism is a single system and not two. According to him, the Buddhist pantheon is neither a Theravada Buddhist nor a specially 'animist' one, but a Sinhalese Buddhist pantheon. The Buddha, gods, demons, and an array of lesser supernatural beings constitute a single system, which displays a wholly consistent structure<sup>[6]</sup>. Obeyesekere's this opinion contradicts in another place when he identifies the religion of Sinhalese Buddhists in two forms: Buddhism and spirit religion. But according to him these two are interlinked<sup>[7]</sup>.

The healing of demonic illness or demonology or the exorcism in Sri Lanka is a broadly discussed topic among the scholars with various aspects. Out of the comprehensive writings the works of Gooneratne<sup>[8]</sup>, Wirz<sup>[9]</sup>, Halverson<sup>[10]</sup>, Scott<sup>[11]</sup>, Seligman<sup>[12]</sup>, Hildburgh<sup>[13]</sup>, Fleisher<sup>[14]</sup>, Yalman<sup>[15]</sup>, Ames<sup>[16]</sup>, Kepferer<sup>[17]</sup>, Obesekere<sup>[18]</sup>, Gombrich and Obeyesekere<sup>[19]</sup>, Windslow<sup>[20]</sup>, Simpson<sup>[21]</sup>, Bailey and Silva<sup>[22]</sup>, Tambiah<sup>[23]</sup>, and Wijesekere<sup>[24]</sup> are significant.

### Signs and Symptoms of demonic illness

Specialists typically trace the onset of demonic illness to a patient's experience of sudden fear or fright, and will inquire after the time and place of unusual frightening or unsettling experience in dreams and in the course of a patient's everyday activity. As we were reported by our informants and Kapferer<sup>[25]</sup> listed, among the most common are: seeing dark mysterious figures moving in the stillness of the night, unexpectedly smelling a foul stench, inexplicably being startled by stones falling on roof, and being surprised by a snake crossing their path, or being attacked by a dog and so on.

If the patient experiences sudden jolt when encountering such an event, this is taken to mean that patient is in the grip, mentally and physically, of a supernatural. So caught, these kinds of victims experience emotional, mental, and humoral imbalance so that the symptoms of demonic illness may be similar to the symptoms of physical illness.

## Diagnosis of Illness

The first signs of possession are varied. It may be a run of bad luck; a series of illnesses, each in itself minor; an illness which fails to respond to normal medical treatment; a sudden change in behavior. Almost anything abnormal can be the first sign of possession. Such events are not necessarily directly or consciously interpreted as demonic possession. Further evidence is required, and this usually takes the form of the subject entering a trance or a fit during which the demon names itself and stops hiding.

As Wirz<sup>[26]</sup>, Kapferer<sup>[27]</sup> and other scholars describe, when a person becomes ill he will consult mostly the western or āyurvedic medical practitioner and undergoes his medication and regime prescribed for some period. If the remedies do not help another cause of the illness is presumed. It is then assumed that the patient is being pursued by the *yakku*, the *prētayo*, *vas-dos*, *gurukam*, or finally the karma, the next turn is therefore the *śāstra-kiyannā* (soothsayer) or *kēndara-balannā* (astrologer) *kapuvā* (priests of shrines to the deities) or *ādurā /gurunnānse* (exorcist). Normally soothsayer say it is *vas-dos* or *dēva-dōṣa* or *apala*. So if it is the latter case they will go to an astrologer and the horoscope can be investigated in order to find out which planet is exerting *apala*. If it is a *dēva-dōṣa*, then the people are told that they must go to the *kapuvā*. If it is a *yakṣa-dōṣa* the exorcist is consulted. All these will attempt to diagnose the illness according to their means and even try with minor rituals. As we observed, the causing factor will be diagnosed according to the specialist the patient first consults.

For Instance, *kapuva* or *gurunnānse* first of all makes his diagnosis, examines the patient, and asks him a few questions. He would ask where the patient stayed before his ill-health, what he did, what he ate and so forth. On the basis of the answers received and the state of the patient he would say that this is the work of the *yakā* or *prētayā*. He would also say that this is due to the patient has imprudently eaten something baked or fried, through the odour of which the *yakku* have been attracted, or that his house is haunted by a *prēta*, and that it is tormenting him. The *gurunnānse* will recommend the performance of a major ritual, like *mahasohon-samayama*, or if it is an easy case, he may first have recourse to a *tel-mātirīma* (charming oil) or *nūl-bāñdīma* (tying on prophylactic thread). In more serious case, if a more extensive ceremony is intended to be performed later on, he ties a "*āpa-nūla*" (bail thread) to the patient in order to prevent the illness progressing and to inform the *yakā* that a more comprehensive offering ritual can be expected within seven-days, twenty one-days, one-month, three-months and so on. And accordingly the major ritual will be taken place. Yet invariably no such ritual will be held if the minor rituals are succeeded.

As we experienced during our field work, the specialists after making the patient possessed or while the patient in a possessed position and would ask him/her 'who are you (indicating that he is addressing the supernatural who is in the patient)'; 'why you came into this person'; 'what do you want'; 'how will you leave this patient' and the like. Then according to the statements received from the patient, the healing process will be arranged.

## Preventive measures

A patient and the family need protection against the unknown and known agents of sickness. A series of precautionary actions have been devised against even the unknown and remedial measures provide cure and relief for the known. The ritualists recommend the wearing on the person certain gems, ornaments etc. as means of protection as well as for good luck. Sinhalese believe that certain charmed oils and objects can ward off diseases, accidents,

snake bites, reptiles, wild beasts, injury and even counter effects of magic. Seligmann elaborates how Sinhalese believe that iron is a protection against all evil spirits<sup>[28]</sup>.

### Curative Measures

According to the writings of Wirrz<sup>[29]</sup>, Yalman<sup>[30]</sup>, Gombrich<sup>[31]</sup>, Winslow<sup>[32]</sup>, Kapferer<sup>[33]</sup>, and our informants we can summarize the healing measures as follows. Depending on the mode of explanation and the method of alleviation controlled by a specific specialist, an individual might attend a trained physician and receive allopathic or herbal medicine and sometimes be advised to regulate the diet, learn from an astrologer and perhaps have protective *yantra* (magical talisman) drawn up; or receive from an oracle the information that he or she is the subject of sorcery and be advised of necessary protective and precautionary measures. Buddhist monks on occasion are appealed to for astrological advice, but more often will be asked to officiate at purificatory and curative rites (*pirit*). Apart from this, they are asked to perform *bōdhi-pūjā* (worship of Bo-tree) to avert misfortunes. A *kapuvā* will mediate between a deity and a patient, intercede on the patient's behalf, organize the *dēva-pūjā* (giving of offerings), and intone the appropriate chants. An exorcist has an array of possible ritual measures at his disposal. These range from application of curative and protective oil, the performance of a short thread-trying ceremony, and the giving of small propitiatory offerings to specific ghosts and demons (*pidēni/dola*), to the organization of elaborate lime-cutting ceremonies (*dehi-kāpīma*), large scale rites to exorcise demonic influence (*tovil*), and intricate ceremonies to placate planetary deities and demons (*bali*).

Apart from these traditional healing practices, we could see during our field work, there are some new and short alternative ways that ritualists invented. Most of these above said practices excluding western medical practice and psychology, share fundamental ideas and principles, and are rooted in Sinhalese cultural beliefs.

According to this we can see that almost all the measures that Āyurveda prescribed for averting and alleviating these kinds of illnesses are in practice among the Sinhalese Buddhists.

### Healing Specialists

According to the Sinhalese Buddhist practice, as Evers termed, there are four 'strata' of supernatural beings. They are Buddha and the Bodhisattvas; next gods, the next lower class consists of the demons, the lowest class is formed by the ghosts<sup>[34]</sup>. Each of these strata except the lowest has its own religious specialists, vic. the *bhikkhu*, the *kapurāḷa/kapuvā* and the *ādurā/yakādurā/kaṭṭadiyā*<sup>[35]</sup>. Ames identifies three major magic ritual systems, usually designated as Demonism, Astrology or Grahism, and Hinduism and they are distinguished on the basis of offerings. Impure offerings are presented to goblins and ghosts; pure and impure offerings are presented to planetary deities; pure offerings are presented to gods or deities. Separate ritual systems and separate ritual specialists are centered around each of these three types of offerings<sup>[36]</sup>. Though the religious specialists are differentiated and in line with the stratification of the supernatural society, the laymen are not. There are no sects worshipping one special god; there are no secret societies connected with the cult of one particular demon. Almost all Sinhalese call themselves *Theravāda* Buddhists, but, nevertheless, take part in exorcist rites or visit the temples of the gods in case of illness or bad luck.

As we observed during our field work, at present we cannot differentiate these three specialists in terms of their engagements. Some monks are conducting the rituals which were attributed to the other three in earlier time. Some lay men conduct all the rituals that a

Buddhist monk does in a temple and their attitude and way of practice are similar to the Buddhist monks and nuns. Again the practice of *ādura* and *kapuvā* is not solely devoted to devils or gods. Another feature is the *kapuvā* shares with the *ādura* the shamanistic practices. Most of them are engaged in all the practices. Also some of the gods themselves shade off into demons: *Hūniyam*, for instance, is sometimes a deity, sometimes a demon; *Kalukumāra* is similarly ambiguous. Though Halverson<sup>[37]</sup> states that there is no any overlapping of the role of the ritual functionary, the above examples show that this status has been gradually changed from the time they observed to the present.

### Healing Rituals

Various kinds of rituals are performed by Sinhalese Buddhists in order to obtain general immunity from evil influence and to heal specific ailments. We can summarize them as *Pirit* (chanting of Texts), *Bōdhi-pūjā*, *Dēva-pūjā*, *Yak-Tovil* (*Sanni-yakuma*, *Raṭayakuma* / *Riddi-yāga-mangallaya*, *Hūniyama*, and *Śāntikarmaya*) *Bali*, *Prēta-taṭuva* / *Pidēṇi*, *Nūl-bāṅḍīma*, *Tel-mātirīma*, *Dehi-kāpīma*, *Yantra* and *Mantra*. In each ritual system specialist mediates between the patient and the supernatural beings; he is little more than an advocate who speaks for his client. Ritual also varies according to the patient's wealth, the nature of his misfortune, and the experience of the specialist whom he hires.

As Samarasinghe argues, any of these or all of these ceremonies can be broadly divided into four parts as the preliminaries, invitation, the ceremony proper and the finale<sup>[38]</sup>.

Gombrich<sup>[39]</sup> identifies three levels of Sinhalese Buddhist rituals and belief as, all integrated to Buddhist pantheon or as Gombrich and Obesekere<sup>[40]</sup> termed 'Sinhalese Buddhist Cosmos', as 'highest level', or Buddhist system such as merit making rituals (*pinkam*), 'middle level', that involves gods and 'lowest level' which deals with spirits and magic.

### Impact of Buddhism on *Bhūta*vidya in Sri Lanka

It is apparent that the Buddhism is an inseparable part of the Sinhalese Buddhist's healing practices, particularly exorcistic healing. This is quite understandable in the light of the following points.

1. The Buddha is given the highest position in the pantheon. In ritual and myth Buddha is treated as the "god above the gods" (*dēvātīdēva*) or "god of gods" (*dēva-dēva*).

Obeysekere describes how the hierarchy of the Sinhalese Buddhist pantheon is recounted in ritual texts. The following preliminary incantation quoted by him gives a clear outline of the Buddhist pantheon.

"The noble refuge of the Buddha

The refuge of the Dhamma the taught

And the jewel of the Sangha

With piety we worship these Three Refuges".

The Buddha, as the head of the pantheon, is worshipped with the hands on the head or forehead<sup>[41]</sup>.

Then the great guardian gods are named, followed by a list of minor local deities who exhibit considerable regional variation.

2. Many of the Sinhalese deities and demons have migrated from India. In Sri Lanka they have been divested almost entirely of their Hindu attributes; myths linking them with the Buddha have been evolved. They have been proselytized and are no longer Hindu but Sinhalese Buddhist, occupying clearly defined positions in a unified hierarchy of supernatural beings.
3. Practically all magic rites begin with the magician's expressing veneration (*vandanā*) for Lord Buddha and occasionally at the end. The merit earned from this virtuous act is then offered to the deities (merit serves to extend their stay in the heavens), or used to frighten the goblins and ghosts.
4. Even the identity of the spirit who is in the patient is known by forcing him or rather the demon in him expose to the Buddha's altar, where he is interrogated by the exorcist in a very rough and stern manner. By the power of the Buddha he is obliged to confess his identity and to promise to leave the patient upon completion of the proper rites.
5. The Buddha himself is introduced into the mythology solely as the ultimate authority of power, and it is in his name that the exorcism is affected. None of the major concepts of doctrinal Buddhism, such as karma, rebirth, nirvana, and the like have any part in the ritual.
6. *Varam* (permission to afflict the human beings with disease on the explicit condition that they restore them to health again) myth overtly connects the demons with the Buddha.
7. All curing techniques had their origins during the time of Buddha. These mythical origins are recited during the rites. For example, it is believed that Buddha during his life-time, said to have uttered the *Ratana-sutta* in order to ward off evil forces and stop epidemics and plagues in Viśālā.

### Similarities and Dissimilarities Between Buddhism and *Bhūtavidya*

The following similarities and dissimilarities can be identified between Buddhism and *Bhūtavidyā*.

1. Buddhist ritual, even though possessing magical potency, is not magic. Buddhist ritual is sacred; magic ritual is profane. For instance, the healing power of *pirita* is secondary; its primary purpose is the mental and spiritual development of the individual.
2. Both Buddhism and *bhūtavidyā* aim to remove suffering and misfortune. Each offers a different kind of release or panacea for a different kind of misfortune. *Bhūtavidyā*, attempts to provide consolation or 'worldly relief' (*laukika-suvaya*). Buddhism, on the other hand, offers a final or transcendental release (*lōkōttara-suvaya*) from evil itself.
3. Like the practice of meditation, the ritual of exorcism aims at release from disturbing condition. Then, to a point, the presuppositions and aims of the two practices are the same. In method too, there is a notable similarity, the role of the patient being much like that of the meditator. He too concentrates on the ritual tableau; withdraws from his own world and focuses his attention on the third world of the ritual. If all is successful, he, too, feels released from fear and anxiety. The symbolic process of the ritual, then, parallels the conscious process of meditation, and the psychological effect is much the same.

Here a questions arise as to "how the Buddhists in Sri Lanka are, then adhere to a practice which has been discouraged by their deified teacher?; and why, then, should the Buddha appear at all? This issue has been discussed by many analysts such as Gooneratne<sup>[42]</sup>,



Wirz<sup>[43]</sup>, Obeysekere<sup>[44]</sup>, Ames<sup>[45]</sup>, Yalman<sup>[46]</sup>, Samarasinghe<sup>[47]</sup>, Halverson<sup>[48]</sup> and Fleisher<sup>[49]</sup>. We can conclude all their arguments as follows:

1. In any civilization there is a great tradition and a great community, and many peasant societies or little communities. In Sri Lanka, the religious great tradition of the civilization is Theravāda Buddhism. Theravāda Buddhism is the commonly shared religion of countries like Thailand and Burma as well. So holistically Theravāda Buddhism in all these countries can be identified as the greater tradition. Though the Theravāda Buddhism is the common factor of these countries, there may be vastly different forms of that from each other in practice based on the geographical, political and ethnic grounds. So it would then be desirable to term religion of the Burmese or Thai simply as Thai or Burmese Buddhism, and the religion of the Sinhalese as Sinhalese Buddhism. Viewed in this perspective, Thai or Sinhalese Buddhism is the little tradition. Sinhalese Buddhism is a single religious tradition, having important structural links and in constant interaction with the great tradition.

2. *Bhūtavidya* is one of component of the Sinhalese Buddhist structure. This does not mean that Sinhalese confuse Buddhism with magical-animism, only that in practice they frequently fuse them. But this practical fusion or 'syncretism' that has led to so much confusion in the minds of observers as either Buddhism is thought to be contaminated by magic, or magic to be an essential part of Buddhism.

3. By venerating Buddha before ritual, the participants symbolize their acceptance of Buddha's superiority over magic, not their indulgence in magical superstitions.

4. Although the two realms of Buddhism and magical-animism are completely separate and distinct in Sinhalese theory, they are complementary in function. This is why Sinhalese fuse them in practice. Demon ritual is so far from the great tradition that many persons- including Buddhists- find it quite alien to Buddhism; others regard the Buddhist element in folk ritual as a thin and factitious veneer on primitive magical-animism.

5. Connecting *varam* myths with the Buddha, is, in a way, bringing the exorcistic rituals under the umbrella of the Great Tradition.

6. More importantly, however, the characteristics of Sinhalese demonism are immediately recognizable as those of primitive religions elsewhere in the world. It represents a little tradition that has only the most superficial connection with Buddhism. Virtually no one, however, considers it anti-Buddhist; it is not in a position of rivalry, nor is it even taken to be ideologically dissonant. But this does not change the fact that, in this particular aspect at least, Sinhalese peasant culture includes two traditions loosely assimilated, but hardly integrated and readily distinguishable.

## Conclusion

With the above discussion we can see that the superstitious fear and worship of evil spirits etc. are in fact the universal religion of nature. The terms given to the component of this universal religion such as mythical history of the evil spirits, names of the evil spirits, nature of inflicting on humans, methods of diagnosis, measures adopted and materials used to ward off the affected ones, may be varied depending on the available social, cultural, philosophical, geographical and natural background. The same entity would be termed as differently. This designates the common nature of the human comprehension and notion.

We also can come to a conclusion that either Buddhism in its original form was not able to fully corporate to find ways out to overcome from the annoyances, such as demonic attack,

that its followers faced in their day-to-day life. Or else, its followers were not competent enough to comprehend fully the solutions laid down in their way of practice, the doctrine of the Buddha. So the general followers of the Buddhism unsurprisingly moved towards some other options that were more simple and popular among others. If not, with the above discussed facts, we can come to another termination that before the arrival of the Buddhism to Sri Lanka, the locals were practicing their own system to challenge the mishaps encountering their existence and they received a satisfactory effect from that system. Hence the Sinhalese comprehended new religion, the Buddhism was ineffectual for this issue, they maintained their original form of religion, the supernaturalism, while nourishing, adopting, incorporating and absorbing both mutually. Therefore, gradually, the Sinhalese were adjusted to the feeling that none of these two was alien or unfamiliar to them. So, the analysts of the modern era distinguish these two according to their 'theorism' as the 'Great Tradition' and the 'Little Tradition'.

Also, this dichotomic appearance of the Sinhalese religion has been distinguished by some scholars into two structures as 'animistic' and 'Buddhistic'. So, the issue which scholars raise, "how a 'Theravāda Buddhist' can practice the things like *bhūtavidyā* that are unauthorized by the founder of that religion for his followers as not to indulge in, or up to what extent Buddhism has allowed its followers to practice *bhūtavidya*", may now be justified in these lines.



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## REVIEW ARTICLE ON *NIDĀNA PAÑCAKA* AND *CIKITSĀ* OF *KĀSA*

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### ABSTRACT

*Kāsa* is *Prāṇavaha Srotoduṣṭijanya Vyāḍhi*. It attains specific distress and sound due to specific causes impeding the forceful *Vāyu*. *Āyurveda* believes that the *Kāsa* is considered to be most troublesome to the throat and so to an individual. *Kāsa* resembles “cough” in modern medical aspect and it is one of the most common medical complaint. It is an essential protective and defensive act whose action secures the removal of mucus, noxious substances and infections from the larynx, trachea and larger bronchi. The five basic components of *Rogaparīkṣā* are *Nidāna* (Etiology), *Pūrva Rūpa* (Prodromal symptoms), *Rūpa* (Symptoms), *Upaśaya* (Relieving and Aggravating Factors) and *Samprāpti* (Pathogenesis) which collectively known as *Nidāna Pañcaka*. Each component of *Nidāna Pañcaka* helps for better understand of disease process and treatment. Also *Nidāna parivarjana* is the first line of treatment in *Āyurveda*. *Āyurveda* authentic classics like *Caraka Saṃhitā*, *Bhāva Prakāśa* have mentioned *Nidāna Pañcaka* and *Cikitsā* for *Kāsa*. Therefore, in this study focused on *Nidāna*, *Pūrva Rūpa*, *Rūpa*, *Samprāpti* and *Cikitsā* of *Kāsa*.

**Key Words:** *Kāsa*, *Nidāna Pañcaka*, *Cikitsā*, *Āyurveda*

## INTRODUCTION

Cough is a condition where *Vāyu* gets upward through the throat and head and causing condition called as *Kāsa* (cough). In *Madhava Nidāna* explained it in as; “*Kasati śiraḥ kaṅthādūrḍhvaṃ - gacchati vāyuriti kāsaḥ.*” It appears as a solitary disease, prodromal symptom (*Pūrva Rūpa*), sign and symptom (*Rūpa*), as a complication (*Upadrava*) or as a fatal sign (*Ariṣṭa Lakṣaṇa*). It is also a cardinal feature of *Kṣaya* (tuberculosis).<sup>[1]</sup>

Cough is the commonest symptom of lower respiratory tract disease. It is caused by mechanical or chemical stimulation of cough receptors in the epithelium of the pharynx, larynx, trachea, bronchi and diaphragm. Afferent receptors go to the cough center in the medulla where efferent signals are generated to the expiratory musculature.<sup>[2]</sup>

In modern medicine, *Kāsa* is explained as the term for “cough”. Cough is a symptom that has been experienced by every human.<sup>[3]</sup> The definition of cough according to modern science is “A rapid expulsion of air from the lungs typically in order to clear the lung airways of fluids, mucus, or other material.”<sup>[4]</sup> It can be the only symptom of illness or it can present with other symptoms in diseases of the lung, heart, stomach and nervous system.<sup>[5]</sup>

Acute cough is defined as lasting less than 3 weeks, chronic cough more than 8 weeks. The most common cause of acute cough in primary care is acute viral upper respiratory tract infection. Usually, acute cough is self-limiting and benign, but it may occur in more serious conditions, which are suggested by “red flag” symptoms.<sup>[6]</sup>

Cough is one of the most common complaints for which patients seek medical attention. In 2015, a meta-analysis by Woo-Jung Song, in which 90 studies were included, indicated that the global prevalence of chronic cough is about 9.6%. The regional prevalence, according to the analysis, was as follows: Europe 12.7%, America 11.0%, Asia 4.4% and Africa 2.3%. Chronic cough is significantly more frequent in Europe and America than in Asia and Africa.<sup>[7]</sup>

*Āyurveda* believes that the *Kāsa* is considered be most troublesome to the throat and so to an individual. This can be with thick and thin mucus or phlegm. Cough troubles a person in his or her daily routine like speaking, eating, sleeping, and sometimes even breathing. Therefore, in this study *Nidāna Pañcaka* and *Cikitsā* of *Kāsa* is literally reviewed.

The general objective of the present study is to review the *Nidāna Pañcaka* and *Cikitsā* of *Kāsa* in authentic *Āyurveda* texts and the specific objectives are to compile and analyze the Etiopathogenesis (*Nidāna* and *Samprāpti*), Prodromal symptoms (*Pūrva Rūpa*), Symptoms (*Rūpa*) of *Kāsa*, to discuss the application of treatment of *Kāsa* and to evaluate the Basic Principles of *Kāsa* treatments.

## MATERIALS AND METHODS

This article is based on a review on *Nidāna Pañcaka* and *Cikitsā* of *Kāsa* from authentic *Āyurveda* and Traditional Medical texts including *Caraka Saṃhitā*, *Suśruta Saṃhitā*, *Madhava Nidāna Aṣṭāṅga Hrdaya*, *Bhāva Prakāśa* and *Sārārtha Saṅgrahaya*.

## NIDĀNA PAÑCAKA OF KĀSA

After one gets exposed to *Nidāna* (etiological factors) of *Kāsa*, *Doṣas* inside the body gets vitiated and manifest in to different types of *Kāsa*. *Acārya Caraka* mentioned *Nidāna* for different types of *Kāsa* and *Acārya Suśruta Acārya Mādhava* mentioned only general *Nidāna* for *Kāsa*.

**TABLE I. KĀSA NIDĀNA (ETIOLOGY)** [8, 9, 10, 11]

<b>Etiology of <i>Kāsa</i></b>	<b>Ca:Sa Ci Ch18</b>	<b>Su:Sa Utt Ch 62</b>	<b>Madh: Ni Ch11</b>	<b>Bhāva Prakā Ch12</b>
<b><i>Vātaja Kāsa</i></b>				
Intake of ununctuous, cold and astringent food	+	-	-	-
Intake of food much less quantity	+	-	-	-
Indulgence in sex	+	-	-	-
Suppression of natural urges	+	+	+	+
Physical strain	+	+	+	+
Exposure to smoke and dust	-	+	+	+
Particles of food moving in wrong paths	-	-	+	+
Consuming dry foods	-	+	-	+
<b><i>Pittaja Kāsa</i></b>				
Intake of pungent, hot, <i>Vidāhi</i> , sour and alkaline food	+	-	-	-
Anger	+	-	-	-
Exposure to the heat of the fire and sun	+	-	-	-
<b><i>Kaphaja Kāsa</i></b>				
Intake of heavy, <i>Abhiṣyandin</i> (ingredients which cause obstruction to the channels and circulation)	+	-	-	-
Sweet and unctuous ingredients	+	-	-	-
Excessive sleep and indolence	+	-	-	-
<b><i>Kṣataja Kāsa</i></b>				
Excessive indulgence in sex	+	-	-	+
Carrying excessively heavy loads	+	-	-	+
Walking excessively long distance	+	-	-	+
Indulgence in fighting	+	-	-	+
Excessive indulgence in restraining the movement of horses and elephants	+	-	-	+
<b><i>Kṣayaja Kāsa</i></b>				
Intake of <i>Viśama</i> or irregular Type of meals and unwholesome food	+	-	-	-
Excessive indulgence in sex	+	-	-	-
Suppression of natural urges	+	-	-	-
Immensely hateful disposition	+	-	-	-
Excessive worry	+	-	-	-

Suppression of natural urges and physical strain have been mentioned as the causes of cough by the all the *Acārya*'s. Exposure to smoke and dust and particles of food moving in wrong paths have been mentioned by both *Acārya Mādhava* and *Acārya Bhāvamiśra*. Other causes are as indicated in the above Table I.

The *Samprāpti* of *Kāsa* is due to the involvement of *Prāna* and *Udāna Vāyu*. *Duṣṭa Prāṇa Vāta* combine with *Udāna Vāta* and expels forcefully out with *Doṣās* through the mouth with a sound similar to broken bronze vessel, called as *Kāsa*. Cough is of five types such as; three caused by

three *Doṣās* (*Vātika Kāsa*, *Paittika Kāsa*, *Kaphaja Kāsa*), the fourth caused by chest wound (*Kṣataja Kāsa*) and the fifth by wasting (*Kṣayaja Kāsa*). When advanced, they are fatal. <sup>(12)</sup>

*Acārya Caraka* has explained *Samprāpti* of *Kāsa* in *Cikitsā Sthāna* as follows:

<i>Adhaḥ pratihatovāyu</i>	- <i>rūrdhvasrotaḥ samāśritaḥ</i>
<i>Udāna bhāvamāpannah</i>	- <i>kaṇṭhe saktastathorasi</i>
<i>Āviśyaśirasahkhāni</i>	- <i>sarvāṇipratipūrayan</i>
<i>Ābhañjannākṣipandehaṃ</i>	- <i>hanumanyetatha 'kṣiṇi</i>
<i>Netrepruṣṭhamuraḥpārśve</i>	- <i>nirbhujyastambhyamstataḥ</i>
<i>Śuṣko vā sakaphovā 'pi</i>	- <i>kasanāt kāsa ucyate</i>

Being obstructed in the lower region of the body, *Vāyu* moves upwards, afflicts the channels of circulation in the upper part of the body, takes over the function of *Udāna Vāyu* and gets lodged in the *Kaṇṭya* (throat) and the *Vakṣasa* (chest). This *Vāyu* enters (afflicts) and fills up all the channels of the head to cause bending (*Ābhañjan*) and stretching (*Ākṣipan*) of the *Śarīra* (body), *Hanu* (jaws), *Manya* (sides of neck) and *Netra* (eyes). Thereafter, this *Vāyu* caused contraction (*Nirbhujya*) and stiffness. <sup>(13)</sup>

Different *Acārya*'s have explained premonitory symptoms (*Pūrva Rūpa*), and symptoms (*Rūpa*) for *Kāsa*. Prior to the onset of *Kāsa*, a patient suffers from *Pūrva Rūpa* (Prodromal symptoms). There is no specific *Pūrva Rūpa* mentioned for different types of *Kāsa*. Therefore, the general *Pūrva Rūpa* were tabulated in below table II.

**TABLE II. PŪRVA RŪPA (PRODROMAL SYMPTOMS)** <sup>[14, 15, 16, 17]</sup>

Prodromal symptoms	Ca:Sa Ci Ch18	Su:Sa Utt Ch 62	Madh: Ni Ch11	Bhāva Prakā Ch12
Feeling of the throat and mouth being filled with thorns	+	-	-	-
Itching in throat	+	-	-	+
Difficulty in intake of food (Ca:sa) (hinderance to swallowing (Su:sa))	+	+	+	+
Coating of throat and palate	-	+	-	-
Slight disorder of voice	-	+	-	-
Loss of taste	-	+	-	-
Weakness of digestive fire	-	+	-	-
Irritation of throat	-	+	+	+
Irritation of oral cavity	-	-	-	+
Feeling of thorns pricking the throat	-	-	+	-

Difficulty in intake of food has been mentioned by all the *Acārya*'s for the prodromal symptoms of cough and irritation of the throat has been mentioned by *Acārya Suśruta*, *Acārya Mādhava* and *Acārya Bhāvamiśra*. Other *Pūrva Rūpa* were mentioned in the above Table II.

**TABLE III. RŪPA (SYMPTOMS)** [18, 19, 20, 21]

Symptoms	Ca:Sa Ci Ch18	Su:Sa Utt Ch 62	Madh: Ni Ch11	Bhāva Prakā Ch12
<b><i>Vātaja Kāsa</i></b>				
Dry cough	+	+	+	-
Pain in cardiac region	+	+	+	-
Pain in sides (flanks)	+	+	+	+
Pain in chest	+	-	-	-
Pain in head	+	+	-	+
Pain in abdomen	-	+	+	-
Pain in temples	-	+	+	+
Hoarseness of voice	+	+	+	-
Dryness of chest, throat and mouth	+	-	-	-
Horripilation	+	-	-	-
Feelling of darkness	+	-	-	-
Sound of that of conch or clouds	+	-	-	-
Anxious expression	+	-	-	-
Debility (decrease of strength)	+	+	+	+
Fainting	+	-	-	-
The paroxysm diminishes after expectorating the dry phlegm with difficulty	+	-	-	-
It gets relieved after intake of unctuous, solted and hot food and drinks	+	-	-	-
Irritation	+	-	-	-
Emaciation of the face	-	+	-	-
Decrease Voice and valour	-	+	-	+
Lack of enthusiasm	-	-	-	+
Grief stricken face	-	-	+	+
<b><i>Pittaja Kāsa</i></b>				
Yellowness in sputum and eyes	+	-	-	-
Bitter taste in mouth	+	+	-	+
Disorder voice	+	-	+	-
Fuming in chest	+	-	-	-
Thirst	+	+	+	-
Burning sensation in body	+	-	+	+
Fainting	+	-	-	-
Anorexia	+	-	-	-
Giddiness	+	-	-	-
The patient while coughing constantly sees as if stars and expectorates phlegm mixed with <i>Pitta</i>	+	-	-	-
Fever	-	+	+	+
Yellow color vomit	-	+	+	+
Pungent	-	+	-	-



Bitter fluids	-	-	+	+
Anemia	-	-	-	+
Burning sensation in chest	-	+	+	+
Burning sensation in throat	-	+	-	-
Yellowish white skin	-	-	-	-
Dryness	-	+	+	+
<b><i>Kaphaja Kāsa</i></b>				
Loss of appetite	+	-	-	-
Anorexia	+	+	+	-
Vomiting	+	-	-	-
Coryza	+	-	-	-
Excitement	+	-	-	-
Heaviness	+	-	-	-
Horripilation	+	-	-	-
Sweet taste in mouth	+	-	-	-
Moistening and malaise	+	-	-	-
The patient feels his chest as if filled up	+	-	-	-
While coughing expectorates profuse, sweet, unctuous and viscous phlegm without pain	+	-	-	-
Mouth coated with <i>Kapha</i> which falls out of the mouth	-	+	-	+
Headache	-	+	+	+
(Feeling of) fullness of the body with <i>Kapha</i>	-	+	-	-
Debility	-	+	+	-
Cough followed by thick <i>Kapha</i> coming out	-	+	+	+
Mouth full with thick saliva	-	-	+	-
Irritation	-	-	+	-
Accumulation of <i>Kapha</i> all over the body	-	-	+	-
Oily secretions throughout the body	-	-	-	-
Itching sensation	-	-	-	+
Loss of taste perception	-	-	-	+
<b><i>Kṣataja Kāsa</i></b>				
Expels sputum mixed with blood	-	-	+	+
Intense pain in the throat	+	-	+	-
Excruciating, piercing and breaking pain with tenderness in chest	+	-	+	+
Pain in joints	+	-	+	+
Fever	+	-	+	+
Dyspnoea	+	-	-	-
Thirst	+	-	+	+
Abnormal voice	+	-	-	+
Changed voice	-	-	-	+
Patient resisting touch by others	-	-	+	-
Voice like that of a pigeon	-	-	+	+
Increased respiration	-	-	+	-
Cough constantly brings out sputum mixed with blood	-	+	-	-

<b><i>Kṣayaja Kāsa</i></b>				
Purulent sputum with streaks of blood expectorated	+	+	+	+
Emaciation	+	+	-	+
Body pains	-	+	+	+
Fever	-	+	+	+
Stupor	-	-	-	+
Burning sensation	-	+	+	-
Eventually death ensues	-	-	-	+
Feeling while coughing as if the heart has fallen from its normal place	+	-	-	-
Suddenly feels heat and again cold	+	-	-	-
Complexion & skin of face is unctuous & clean	+	-	-	-
Pretty eyes	+	-	-	-
Sole of hands and feet is smooth	+	-	-	-
Always envious and disgustful	+	-	-	-
Coryza	+	-	-	-
Anorexia	+	-	-	-
Liquid or solid stool	+	-	-	-
Hoarseness of voice without an apparent cause	+	-	-	-
Delusion	-	+	+	-
Wasting of muscles	-	+	+	-
Decrease of respiration	-	+	-	-
Debilitated	-	-	-	-
Dryness of body	-	-	+	-
Extreme weakness	-	-	+	-

The complete manifestation of disease with prominent clinical features is termed as *Rūpa*. These are prominent diagnostic tools of a disease. The voice of a patient resembles the sound that comes out of a broken bronze vessel is the general clinical feature of cough and other specific clinical features according to the type of cough mentioned by different *Acārya*'s were tabulated in Table III.

*Upaśaya* and *Anupaśaya* is not separately explained in *Kāsa* chapter in *Samhitās*. *Upaśaya* is the administration of medicine, food or activity which bring about *Sukha* (comfort, relief of symptoms) to the patient. This is also known as *Sātmya* (compatible). The opposite of *Upaśaya* is *Anupaśaya* (increasing the discomfort) or *Asātmya* (incompatible) to the disease. [22]

*Kāsa* is caused due to vitiation of the *Prāṇa* and *Udāna Vāta* and move to upward direction. Aggravation of *Kapha Doṣa* results in the obstruction in *Prāṇavaha Srotas*. Also, obstruction of *Prāṇavaha Srotas* results in *Swāsa* and *Prathiśya* and, alongside of them, *Kāsa* occurs. Therefore, in general, *Vāta* and *Kapha* should be pacified in *Kāsa Roga*.

Treatments for five types of *Kāsa* have been mentioned by *Acārya Caraka* in *Caraka Samhitā*, *Acārya Vāgbhaṭa* in *Aṣṭāṅga Hṛdaya*, *Acārya Bhāvamiśra* in *Bhāvaprakāśa* and King *Buddhadāsa* in *Sārārtha Saṅgrahaya*. Therefore, lines of treatment for different types of *Kāsa* were compiled and analyzed and those different treatment modalities mentioned in authentic texts were presented in below Table IV.

**TABLE IV. BASIC CONCEPTS OF KĀSA TREATMENT** [23, 24, 25, 26]

Treatment	Ca : sa: Ci Ch 18	Ash: hr: Ci Ch 3	Bhāva Prakā Ch 12	Sarartha San Ch 19
<b><i>Vataja Kāsa</i></b>				
Treat with unctuous material (medicated ghee, medicated enema gruels vegetable soups, milk meat soup etc.)	+	+	-	-
Unctuous preparations	+	-	-	-
Smoking	+	-	-	-
Linctus	+	-	-	-
Massage (oil)	+	+	-	+
Sprinkling	+	-	-	-
Unctuous fomentations	+	+	-	+
Associated with constipation and flatulence then the patient should be treated with medicated enema	+	+	-	-
Dryness of upper parts administering <i>Ghṛita</i> before meals	+	-	-	-
Excess of <i>Pitta</i> by unctuous purgation	+	-	-	-
Excess of <i>Kapha</i> by unctuous purgation	+	+	-	-
Inhalation	+	+	-	-
Pouring of warm decoction over the body	+	+	-	-
Confections	+	+	-	-
Immersing the body in water when there is obstruction to feaces and flatus	+	+	-	-
When associate with <i>Pitta</i> by administration of medicated ghee & milk after the ingestion of food	+	+	-	-
Food and drinks that increase energy	-	-	-	+
Diet associated with meats, cereals, pulses	-	-	+	-
Gruel prepared in the decoction of <i>Daśamūla</i>	-	-	+	-
Soup prepared from the meats of either crabs or <i>Sṛṅgi</i> mixed with powdered <i>Śuṅṭhi</i> fried in ghee	-	-	+	-
<b><i>Pittaja Kāsa</i></b>				
When associated with the aggravation of <i>Kapha</i> , then the patient should be given emetic therapy	+	+	-	-
After aggravated <i>Doṣas</i> are eliminated the patient should be treated with cool and sweet regimen	+	+	-	-
In <i>Pittaja</i> type of <i>Kāsa</i> the phlegm is thin then the patient should be given purgation therapy	+	-	-	-
After the administration of purgation therapy, <i>Peyā</i> should be given followed by food preparations, medicated ghee & recipes of linctus	+	-	-	-

Decoction of <i>Bṛhaṭī</i> , <i>Kaṇṭakārī</i> , <i>Drākṣā</i> , <i>vāsā</i> , <i>karcūra</i> , <i>bālaka</i> , <i>Śuṅṭhī</i> and <i>Pippalī</i> mixed with sugar and honey cures <i>Pitta Kāsa</i>	-	-	+	-
When there is solid <i>Kapha</i> the food should be cold, dry and mixed with drugs of bitter taste should be consumed as <i>samsarja</i>	-	+	-	-
In <i>pitta Kāsa</i> , having thin <i>Kapha</i> , <i>Trivṛt</i> should be used for producing purgation along with drugs of sweet taste, and along with drugs of bitter taste when the <i>Kapha</i> is solid	-	+	-	+
Should be given emetic therapy in the beginning	+	+	-	+
Should be given barley and such other <i>Kapha</i> alleviating ingredients as are pungent, ununctuous and hot in potency, to eat	+	-	-	+
The patient should take light food with soup prepared by adding pungent drugs, or with the oil of sesame or mustard and <i>Bilva</i>	+	-	-	-
Drink honey, sour drinks, warm water, butter milk or harmless alcoholic drinks	+	-	-	-
<i>Puṣkara mūla</i> , root of <i>Āragvadha</i> and <i>Paṭola</i> should be kept in water for the whole night next morning, the water should be taken mixed with honey in three times of meal	+	-	-	-
In the beginning, lick the oil exuding out from a piece of wood of <i>Surākāṣṭha</i> set on fire, mixed with powder of <i>Vyoṣa</i> and <i>Yavakṣāra</i>	-	+	-	-
Purifactory therapies - lower and of the head should be administered, judiciously, using strong purgative drugs for persons who are strong	-	+	-	-
For the regimen of diet mess prepared from <i>Yava</i> , <i>Mudga</i> , <i>Kulattha</i> , hot and dry with predominance of pungent taste should be used	-	+	-	-
<i>Kāsamarda</i> , <i>Vārtāka</i> , <i>Vyāghrī</i> mixed with <i>Yavakṣāra</i> and <i>Kaṇā</i> are to be used as vegetables	-	+	-	-
Soup of meat of animals of desert lands and those living in burrows, mixed with oils of <i>Tila</i> , <i>Sarṣapa</i> or <i>Nimba</i> may used	-	+	-	-
If decoction of <i>Pippalī</i> , <i>Kaṭphala</i> , <i>Śuṅṭhī</i> , <i>Śṛṅgī</i> , <i>Bhārṅgī</i> , <i>Marica</i> , <i>Kṛṣajīraka</i> , <i>Kaṇṭakārī</i> , <i>Sindhuvāra</i> , <i>Yavānī</i> , <i>Citraka</i> and <i>Vāsā</i> with a dash of powdered <i>Pippalī</i> is used, it cures <i>Kaphaja Kāsa</i>	-	-	+	-
<b><i>Kṣataja Kāsa</i></b>				
Initiated instantaneously with sweet drugs and drugs belonging to <i>jīvanīya</i> group	+	+	+	-
The regimens prescribed for the <i>Paittika</i> type of <i>Kāsa</i>	+	-	-	-

If the ailment is associated with <i>Vāyu and Pitta</i> , then the massage should be given with ghee	+	+	-	-
Patient should be given <i>Uraḥṣata</i> treatment	-	-	-	+
If <i>Vāyu</i> is aggravated in excess causing pain, then massage should be given with oil prepared by boiling with <i>Vāyu</i> alleviating drugs	+	+	-	-
Patient should be given <i>Uraḥṣata</i> treatment	-	-	-	+
If there is injury inside the chest, then <i>Lākṣā</i> mixed with honey should be consumed with milk immediately	-	+	-	-
Flour of <i>Āma Yava</i> is boiled with milk and consumed along with ghee, when there is fever and burning sensation	-	+	-	-
The patient of cough should drink <i>Ghṛta</i> processed with drugs of sweet taste	-	+	-	-
Cough associated with pain in the ribs should lick the powder of <i>Madhūka</i> , <i>Madhuka</i> , <i>Drākṣā</i> , <i>Tvakkṣīrī</i> , <i>Pippali</i> and <i>Balā</i> mixed with ghee and honey	-	+	-	-
Patients of haemoptysis should drink <i>varṣābhū</i> , <i>śarkarā</i> , flour of red rice, mixed with juice of <i>drākṣā</i> , milk and ghee	-	+	-	-
Bleeding from other passages appropriate treatment as described in the treatment of <i>Raktapitta</i> should be adopted	-	+	-	-
<b><i>Kṣayaja Kāsa</i></b>				
Manifested with all the signs and symptoms, and if the patient is weak, then he should not be treat	+	-	-	-
Given nourishing therapy	+	+	-	-
Given mild purgative along with unctuous ingredients	+	+	-	-
<i>Anuvāsana</i> type of enema	+	+	-	-
Should drink ghee processed with <i>Karkoṭaki</i> , milk and the two <i>Balā</i>	+	+	-	-
Patient should be given <i>Uraḥṣata</i> treatment	-	-	-	+
Powdered bark of <i>Arjuna</i> plant ,soaked repeatedly in <i>Vāsā</i> juice and taken in along with honey, ghee and sugar candy	-	-	+	-

As mentioned by the *Acharyas*, treatment for *Vātaja Kāsa* is mainly done with *Snigdha* drugs. The *Vasti* and *Virecana* karma with *Snigdha* drugs were the mainly mentioned *Śodhana* procedures that help to clean the obstruct channels and pacify *Vāta Doṣa*. When considering the treatment for *Pittaja Kāsa*, mainly *Madhura* and *Tikta Rasa* drugs and *Śita Vīrya* drugs have been used. *Vamana* and *Virecana Karma* were the mainly described *Śodhana* procedures for *Pitta Kāsa* which removes *Mārgāvaroda*. *Pitta* and *Kapha* pacification is mainly considered here.

Common treatments for *Kaphaja Kāsa* haven't been mentioned by *Acāryas*. But *Acārya Vāgbhaṭa* and *Acārya Bhāvamiśra* mentioned different treatments for *Kaphaja Kāsa*. When considering the treatment for *Kaphaja Kāsa*, mainly *Tikta Rasa*, *Rūkṣa guṇa* and *Uṣṇa Vīrya* drugs have been used. *Vamana* and *Virecana karma* were described as *Śodhana* procedures for *Kaphaja Kāsa*, which removes *Mārgāvaroda* and *Kapha* pacification is mainly considered here.

The treatment for *Kṣataja Kāsa* mainly consisted of *Vāta Śamana* treatments and symptomatic treatments. When considering the treatments for *Kṣayaja Kāsa*, *Vṛnhana Karma* and *Śodhana* procedures with unctuous drugs were mainly mentioned and these treatments clear the obstructed channels and pacify *Vāta Doṣa*. In addition, *Urakṣata* treatments were mentioned in *Sārārtha saṅgrahaya* for both *Kṣayaja Kāsa* and *Kṣataja Kāsa*.

## CONCLUSION

*Kāsa* is *Prāṇavaha Srotoduṣṭijanya Vyāḍhi*. *Vāta* and *Kapha Doṣās* are mainly contributing towards the etiology of *Kāsa*. There are five types of cough. Therefore, different symptoms and treatments are given in authentic texts according to the type of cough. The *Vātaja*, *Pittaja* and *Kaphaja* types of cough are curable and *Kṣataja*, *Kṣayaja* types of cough manageable. If the *Kāsa* is not treated properly and neglected, the condition will worsen. *Nidāna Parivarjana* (avoiding etiological factors), *Śodhana* (purification therapy), *Śamana* (pacification therapy), disease specific treatment are principles of management for all types of *Kāsa*. Also, there is *Samprāpti Khaṇḍana* of *Kāsa* by the use of ingredients that contained *Rasa* (*Kaṭu, Tikta, Kaṣāya*), *Guṇa* (*Laghu, Rūkṣa, Tikṣṇa*), *Vīrya* (*Uṣṇa*), *Vipāka* (*Madhura*) and *Doṣakarma* (*Vāta and Kapha*) which pacify *Vāta* and *Kapha Doṣās* and Hence there is alleviation of *Kāsa*. Therefore, the above study of *Nidāna Pañcaka* and *Cikitsā* of *Kāsa* helps in accurate understanding of etiology, pathogenesis, prodromal symptoms, signs and symptoms and treatments of *Kāsa*. This detailed knowledge helps to diagnose and management of various types of *Kāsa*

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## A COMPARATIVE STUDY ON DIABETES MELLITUS AND *MADHUMEHA* : FOR MANAGEMENT AND PREVENTION

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### Abstract

Diabetes mellitus (DM) is a rapidly increasing, health hazard which causes serious problems to human health in all parts of the world. *Madhumeha* in Ayurveda medical system depicts features analogous to DM. Diet and lifestyle modification could be used to prevent and manage the consequences of this disease effectively. Aims of this study are to compare Ayurveda and modern medical concepts on DM and bring into the limelight the dietary and lifestyle guidelines for management and prevention of DM. Ayurveda compendia, scholarly publications and internet literature were used to collect data. DM is a metabolic disease characterized by hyperglycemia due to defect in insulin secretion, insulin action or both. *Madhumeha* is a sub category of “*Prameha*”; urinary disorders in Ayurveda. “Diabetes” means “a flowing through”. *Madhumeha* means excessive passage of honey like or sweet tasted urine. In DM blood glucose levels rises, similarly the body of the *Madhumeha* patient become sweet tasted. DM and *Madhumeha* could be hereditary (*Sahaja*) or acquired (*apathynimiththaja*). Both DM and *Madhumeha* bare common clinical features such as polyuria (*prabhuthamuthratha*), polydipsia(*trishnadhikya*), polyphagia(*kshudha*), burning sensation of palm and sole (*hasta pada daha*), diabetic coma (*murcha*). The causal factors of the disease like diet, sedentary life style, stress share common grounds. Measures taken for prevention and management in both systems could be utilized for an enhanced effect. Diet of the diseased should contain old rice, barley, grains, fat free meat etc. To defeat the causative factors of sedentary life style and lack of physical activity and bring down glucose levels, exercises like walking, wrestling, horse riding would be beneficial. Hence both systems mention stress is responsible, measures like Yoga, meditation and relaxation could be used to eliminate stress. Ancient and modern knowledge mingled with each other may provide better guidelines to answer the challenge of this alarming disease.

**Keywords:** Ayurveda, Diabetes, *Madhumeha* Diet, Exercises

## Introduction

Non communicable diseases (NCDs) are the leading cause of death globally<sup>[1]</sup>. Diabetes mellitus (DM) is one of the four major non communicable diseases (NCDs), rapidly increasing, health hazard which causes serious problems to human health in all parts of the world<sup>[2,3,4]</sup> They carry a huge cost that extends beyond health, to trap individuals in poverty and deny them the quality of life<sup>[5]</sup>. They undermine the workforce productivity and threaten economic prosperity<sup>[5,6]</sup>. The world is facing a pandemic of DM affecting both developed and developing countries<sup>[6]</sup>. By 2025, South East Asia is expected to be the region with the highest number of diabetic patients in the world<sup>[2,3,6,7,8]</sup>.

## Research Problem

Sri Lankan studies illustrate a definite upward trend in the prevalence of DM<sup>[9,10,11,12]</sup>. A significant proportion of diabetic adults may yet are undiagnosed<sup>[12]</sup>. Critical attention should be given to prevent and manage DM as may affect sustainable developmental goals of the country<sup>[10,11,12]</sup>. *Ayurveda* elaborately discusses Diabetes and its management. Measures taken for prevention and management in both systems could be utilized for an enhanced effect if a successful integration exists between *Ayurveda* and allopathic medicine.

## Objectives

This review aims to compare *Ayurveda* and modern medical concepts on DM and bring into the limelight the dietary and lifestyle guidelines for management and prevention of DM.

## Research Design/Materials and Methods

*Ayurveda* compendia, scholarly publications, WHO guidelines and internet literature, were used to collect data.

## Results/ Findings

DM is “a group of metabolic diseases characterized by hyperglycemia resulting from defects in insulin secretion, insulin action or both<sup>[13]</sup>. “Diabetes” means “a flowing through”. The history of diabetes mellitus begins with the mention of polyuria in Ebers papyrus in 1550 BC.<sup>[14]</sup>

Though Celsus (30 BC-50 BC) recognized the disease, Aretaeus or Cappadocia gave the name “Diabetes” (a siphon). He made a complete description of diabetes mellitus describing it as “melting down of the flesh and limbs into urine <sup>[14]</sup>. Three types of diabetes are recognized such as, Type-1 (beta cell destruction- autoimmune/idiopathic), Type-2 (defect in insulin resistance or insulin secretion, impaired glucose tolerance), and Type-3 (gestational) <sup>[10]</sup>.

According to descriptions in all Ayurveda classics, “*Prameha*” is one of the major diseases and it is as old as the history of mankind. The origin of this disease is traced up to the prehistoric period and *Acarya Caraka* has mentioned it as one of those diseases which commenced by the time of historic disruption of the *Yagaya* organized by *Daksha Prajapati* in ancient time.

Due to the consumption of *Havlish*, a special type food made from milk, sugar, ghee, rice use as an oblation of Yagya “*Prameha*” disease was originated for the first time<sup>[15]</sup>. The word *Prameha* is a combination of "Pra" upasarga (Pre-fix) and "Meha" a *Dhatu* (root). *Meha* is derived from the root "Mih - *Sechane*" meaning Watering. In reference to disease of human body, it may have meaning of passing urine. The meaning of "Pra" is excessive in both quantity and frequency. Therefore the word *Prameha* means "Passing of urine profusely both in quantity and frequency.

"*Prameha*” a collection of urinary disorders mentioned in *Ayurveda*. It is a metabolic disorder and a “*Mahārōga*” (difficult to cure) <sup>[16,17]</sup>. Cardinal features of “*Prameha*” are excessive passage of urine (*Prabhutha muthratha*) and turbidity in Urine (*Avila muthratha*)<sup>[16,17]</sup>.

*Prameha* is a *tridoshaja* (humors responsible for physical functions of human body) disease <sup>[18]</sup>. Relative predominance of dosha, dushya ( tissues) and *nidana* ( causative factors) enable its classification in to *Vataja*, *Pittaja* and *Kaphaja*. There are 10 *Kaphaja* types, 6 *Pittaja* types and 4 *Vataja* types in *Prameha*. There is slight controversy in the nomenclature according to various *Acharyas* of these 20 types. (Figure 1, Figure 2 and Figure 3)

**Figure 1: Types of *Kaphaja prameha* as per different Ayurveda Classics**

<i>Caraka</i>	<i>Suśruta</i>	<i>Aṣṭāṅga Hridaya</i>	<i>Aṣṭāṅga Saṃgraha</i>	<i>Madhava</i>
<i>Udakameha</i>	<i>Udakameha</i>	<i>Udakameha</i>	<i>Udakameha</i>	<i>Udakameha</i>
Iksuvalikameha	Iksuvalikameha	Iksuvalikameha	Iksumeha	Iksumeha

<i>Sāndrameha</i>	<i>Sāndrameha</i>	<i>Sāndrameha</i>	<i>Sāndrameha</i>	<i>Sāndrameha</i>
<i>Sandraprasadmeha</i>	<i>Surameha</i>	<i>Surameha</i>	<i>Surameha</i>	<i>Surameha</i>
<i>Shuklameha</i>	<i>Pistameha</i>	<i>Pistameha</i>	<i>Pistameha</i>	<i>Pistameha</i>
<i>Śukrameha</i>	<i>Śukrameha</i>	<i>Śukrameha</i>	<i>Śukrameha</i>	<i>Śukrameha</i>
<i>Shitameha</i>	<i>Shitameha</i>	<i>Lavanmeha</i>	<i>Shitameha</i>	<i>Shitameha</i>
<i>Siktameha</i>	<i>Siktameha</i>	<i>Siktameha</i>	<i>Siktameha</i>	<i>Siktameha</i>
<i>Shanairmeha</i>	<i>Shanairmeha</i>	<i>Shanairmeha</i>	<i>Shanairmeha</i>	<i>Shanairmeha</i>
<i>Alalmeha</i>	<i>Phenameha</i>	<i>Lalameha</i>	<i>Lalameha</i>	<i>Lalameha</i>

**Figure 2: Types of Pittaja prameha as per different Ayurveda Classics**

<i>Caraka</i>	<i>Suśruta</i>	<i>Aṣṭāṅga Hridaya</i>	<i>Aṣṭāṅga Saṃgraha</i>	<i>Madhava</i>
<i>Ksharmeha</i>	<i>Ksharmeha</i>	<i>Ksharmeha</i>	<i>ksharmeha</i>	<i>Ksharmeha</i>
<i>Kalameha</i>	<i>Amlameha</i>	<i>Kalameha</i>	<i>Kalameha</i>	<i>Kalameha</i>
<i>Nilameha</i>	<i>Nilameha</i>	<i>Nilameha</i>	<i>Nilameha</i>	<i>Nilameha</i>
<i>Lohitameha</i>	<i>Shonitameha</i>	<i>Raktameha</i>	<i>Raktameha</i>	<i>Raktameha</i>
<i>Manjishthameha</i>	<i>Manjishthameha</i>	<i>Manjishthameha</i>	<i>anjishthameha</i>	<i>Manjishthameha</i>
<i>Haridrameha</i>	<i>Haridrameha</i>	<i>Haridrameha</i>	<i>Haridrameha</i>	<i>Haridrameha</i>

**Figure 3: Types of Vataja prameha as per different Ayurveda Classics**

<i>Caraka</i>	<i>Suśruta</i>	<i>Aṣṭāṅga Hridaya</i>	<i>Aṣṭāṅga Saṃgraha</i>	<i>Madhava</i>
<i>Vasameha</i>	<i>Vasameha</i>	<i>Vasameha</i>	<i>Vasameha</i>	<i>Vasameha</i>
<i>Majjameha</i>	<i>Sarpimeha</i>	<i>Majjameha</i>	<i>Majjameha</i>	<i>Majjameha</i>
<i>Hastimeha</i>	<i>Hastimeha</i>	<i>Hastimeha</i>	<i>Hastimeha</i>	<i>Hastimeha</i>
<i>Madhumeha</i>	<i>Kshaudrameha</i>	<i>Madhumeha</i>	<i>Madhumeha</i>	<i>Madhumeha</i>

As mentioned above according to *Dosha* predominance 20 types of “*Prameha*” are there, and “*Madhumeha*” is one of them. Whole body of the “*Madhumeha*” patients become sweet tasted (“*Madhura rasa*”) [16,17]. *Madhumeha* means excessive passage of honey like or sweet tasted urine. All the other categories if untreated in due course ultimately lead to “*Madhumeha*” [16].

*Madhumeha* in *Ayurveda* medical system depicts features analogous to DM in modern science. In DM blood glucose levels rises, similarly the body of the *Madhumeha* patient become sweet tasted <sup>[16,17,18]</sup>. According to *Ayurveda* classics Glucose we could suggest that Glucose may be present in urine. In *Madhumeha* urine becomes sweet tasted and attracts flies. DM and *Madhumeha* could be hereditary (*Sahaja*) or acquired (*apathynimiththaja*). The researches mention that if one of the parents suffer from DM the tendency for a child to get DM is 80 percent. In recent studies about the diabetes shows that hereditary carries the autoimmune destruction of the islet of Langerhans of the Pancreas which causes defective insulin secretion <sup>[20]</sup>. Genetic defect to produce the diabetes is taken in the modern science under the umbrella of MODY (Maturity onset diabetes of young). *Acarya Susruta* in *Cikitsa sthana* mentions that '*Sahaja*' as a type and causative factor of *madhumeha* and it is caused due to the defects in the '*Beeja*' of mother and father<sup>[21]</sup> *Acharya Caraka* have mentioned the term '*Jata pramehi*' i.e, diabetic right from the time of birth and '*Beejadosat*' i.e. due the abnormalities in *Beeja*. *Caraka* narrated that this type of *Sahaja pramehi* can occur due to defect in *Beeja*, *Beejabhaga* or *Beejabhagavayava* <sup>[22]</sup>. *Chakrapani* explained that this defect may be caused due to the indulgence of faulty foods at the time of pregnancy. *Caraka* opined that indulgence in excessive use of *madhura Rasa* by mother at the time of pregnancy causes *Madhumeha* and *Sthaulya* <sup>[23]</sup>. This tallies with the modern explanations of gestational diabetes which is emerged during the pregnancy.

Modern scientists mention that DM is caused by over consumption of carbohydrates, lipids and fat containing food etc. <sup>[24]</sup>. "*Apathya nimittaja Prameha*" is referred to the acquired form of *Prameha*. All the classics of *Ayurveda* mentioned that consumption of diet which is sweet, heavy, and fatty, and increases *Kapha dosha* by nature and sedentary life style with lack of physical exercise and excess sleep are the causes of *Prameha*. Any diet or behavior which increase *Kapha*, *Meda* and *Mutra* in excess are the causative factors of *Prameha* <sup>[25,26,27,28]</sup> The description of *Apathya nimittaja Prameha* is very similar to that of Type 2 Diabetes Mellitus.

The *Ayurveda* etiology includes intake of *navanna* (newly harvested paddy) which is rich in carbohydrates along with *guda vikriti* (items made out of jaggery and sugar), *payamsi*, *dadhini* (diary products) which have lactose and less number of

carbohydrate chains and are easily metabolized, *gramya anupa mamsa rasa* (meat and flesh of the water and land animals) are rich in proteins and lipids and fats. The food which is ingested gets assimilated and utilized by *jatharagni* (digestive power) and this gets impaired to begin with. Thus free glucose increases in the blood which collect the seven water molecules for one glucose molecule and excreted through *mutravaha srotas* (kidney, ureter, bladder) and ultimately accumulates in the *vasti* (bladder), where reabsorption mechanism fails (in Henley's loop) and sweet urine or glycosuria is witnessed ultimately in all *pramehas*.

Lifestyle habits such as *Divaswapna* (sleeping in day time), *Asya atisuka, alashya* (Lack of physical exercise), *achinta* (sedentary life style) aggravate *kapha* and *meda* and causes *Prameha*. These activities are recognized as less energy expenditure habits which causes ineffective mobilization of fats from adipose tissue while synthesis and storage of fats continues leads to insulin resistance and finally develops diabetes. Obesity is one of the main leading causes of DM. Excessive increase of fats causes insulin resistance and ultimately insulin deficiency & insulin resistance leads to DM. Similarly, “*Sthoulya*” is a *nidanathakara roga* (Causative disease) for *Prameha*.

Both DM and *Madhumeha* symbolize common clinical features such as polyuria (*prabhuthamuthratha*), polydipsia (*trishnadhukya*), polyphagia (*kshudha*), burning sensation of palm and sole (*hasta pada daha*), diabetic coma (*murcha*)<sup>[15,16,17]</sup>. The causal factors of the disease like unwholesome diet, sedentary life style, stress share common grounds<sup>[29,30,31]</sup>. WHO mentions that up to 80% of type 2 diabetes is preventable by adopting a healthy diet and increasing physical activity<sup>[1,31,32,33]</sup>.

*Ayurveda* strongly emphasizes on preventive aspects of health rather than curative. Attention is given to aspects of diet, habits/lifestyle (*vihara*) and drugs (*Aushadha*) to control DM<sup>[5,16,17]</sup>. For management of DM, *Ayurveda* concepts of daily regimens (*dinacharya*), seasonal regimens (*Ritucharya*) moral conduct (*sadvritta*) and social conducts (*Achara rasayana*), guidelines for healthy diet and lifestyle should be considered<sup>[25,26,27,28,]</sup>.

*Ayurveda* emphasizes the utmost importance of role of diet in management and prevention of DM<sup>[25,26,27,28]</sup>. The approach to manage the disease is completely dependent upon the strength and digestive power of the patient, type of vitiated and predominant *dosas*, nature

of therapy and season of time of administration of therapy <sup>[35]</sup> As if a bird reaches its nest on a tree, *Prameha* reaches the person who eats more unhygienic and lazy<sup>[17]</sup>. Management of a *pramehi* patient is dependent on the strength of the patient. *Ayurveda* treatment protocols are very much individualized; used depending on tolerance of patient and intensity of the disease <sup>15,16,17</sup>. *Shodhana* (strong purifying modalities) to eliminate vitiated *doshas* is prescribed for stronger persons. For weaker and for whom *shodhana* is contraindicated *Shamana* (palliative treatment) is used to pacify *dosha* and relieve the disease <sup>[15,16,17]</sup>. Rejuvenate therapy (*rasayana*) strengthening or restorative in nature is used to balance and remove any debility in the patient caused by the purification or cleansing <sup>[15,16,17,18]</sup>.

Slender and weak patient are advised to have "*Brimhana*" or medication and diet which increase *dhatu*s in the body and *Samana cikitsa* which includes Diet, Exercise, Medicine. For a strong person "*Apatarpana*" or medication and diet which decrease *dhatu*s in the body and *Samana cikitsa* which includes Diet, Exercise, Medicine to pacify the body *dosas* would be used.<sup>[36]</sup>

Contraindicated food (*Apathyaahara*) for diabetes are Alcohols, milk, dairy products, oil, ghee, sugarcane juice or sugar, jiggery, curd, flour containing cakes, sweet drinks, meats of domestic and aquatic animals <sup>[25,26,27]</sup>. Evidence has proved that high fat and meat intake are associated with DM as they increase HDL levels and adversely affect lipid profile <sup>[29,30,31,32,33,34]</sup>. Bakery and dairy products, sugar added foods, molasses are found to be predisposing factors of Diabetes <sup>[29,30,31,32,33,34]</sup>..They immediately burden the beta cells of Langerhans and as a result can lead to insulin resistance etc. Hence unfavorable diet should be avoided <sup>[29,30,34]</sup>. Diet of the diseased should contain old rice, pulses, vegetables, fruits, cereals like barley, grains, fat free meat etc. <sup>15,16,17</sup>

WHO recommends that a reduced energy, low glycemic indexed diet with exercise to promote better glycemic control <sup>[1]</sup>. To defeat the causative factors of sedentary life style and lack of physical activity <sup>[29,30,31]</sup> and bring down glucose levels, exercises like walking, wrestling, horse riding would be beneficial <sup>[21]</sup>. Idle sitting (*Asya sukha*), prolonged and excessive sleeping (*swapna sukha*), day time napping (*diwanidra*), lack of exercise (*Avyayama*), untimely eating (*Adhyashana*) should be avoided <sup>[25, 26, 27]</sup>. 100 *yojanas* (1 *yojana* = 7.5km) to be walked in 100days are recommended. <sup>[16]</sup>



Hence both systems mention stress is responsible [20,1,13,25,26,27,28,29,30,31,32,33,,34] measures like *Yoga*, meditation and relaxation could be used to eliminate stress. Specific yoga positions (*Asanas*) such as *pranayama*, *suryanamaskara*, *dhanurasana*, *kurumasana*, etc. are beneficial in releasing stress ,stimulating internal organs , glands, improving immunity and organ function. Malhothra et.al has described research mention that some *Yog asanas* ( Postures) activates pancreas gland due to its stimulations<sup>[37]</sup>. Further *yoga asanas* may increase insulin secretion. *Sarvangasana*, *Matsyasana*, *Savasana*, *Halasana*, *Dhanurasana*, *Shirsasana*, *Paschimottasana* are said to be beneficial for the diabetic patients. Rhythmic breathing, *Anuloma-viloma*(alternate breathing with retention of the breath), *Kapala Bhati pranayama* mentioned in *Pranayama* of *Yoga darshana* are very much helpful in controlling blood sugar level as well as improve quality of life in diabetes patients<sup>[37]</sup>. Excessive levels of mental strain (*athi-chintha*), worries (*athi-shoka*), hatred (*krodha*) are causative factors. Therefore they should be avoided. Meditation leads to emotional and stress release<sup>[15,16,17]</sup>

## Conclusion

Along with drug therapy measures like individualized dietary interventions, *Yoga*, meditation, could be utilized to manage DM. Knowledge on healthier diet and lifestyle plans should be promoted among public in order to prevent the pandemic. This major disease can be managed by giving comprehensive attention to four aspects which are *Nidana parivarjana*, *Ahara* (diet), *Vihara* (exercise) and *Aushadha* (medicine). The role of *ahara* and *vihara* are equally or even more important to control blood sugar level as well as to prevent complications of this disease. Ancient and modern knowledge mingled with each other may provide better guidelines to answer the challenge of this dreadful, menacing disease and prevent its' appalling rise.

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# A COMPREHENSIVE PARALLEL STUDY OF *GIRIMĀNANDA SUTTA* BUDDHISM WITH A PURVIEW OF AYURVEDA *ŚARĪRA RACANĀ* (ANATOMY)

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## Abstract

Buddhism is one of the ancient Eastern religious philosophies which has a special feature that it was taught by the Lord Buddha, a human being. *Paritta* or *Pirit* is believed to be a doctrine (of *Theravāda* Buddhism) taught by *Gautama* Buddha under the *Sutta Piṭaka* and is believed to protect against evil and supernatural powers, promote health with physical, mental and spiritual well-being. *Girimānanda Sutta* comes under the Buddhist philosophical literature in the *Dasaka Nipāta* /60 of *Aṅguttara Nikāya* in *Sutta-piṭaka*. It was used to heal the Venerable *Girimānanda* who was severely ill. Various Ayurveda *Samhitā* including the *Suśruta Samhitā* and *Caraka Samhitā* mentioned that detailed description of the Ayurveda *Śarīra Racanā* (Anatomy) in a separate chapter called *Śarīrasthāna*. This review aims to theoretically analyze the Ayurveda anatomy-related informative facts in *Girimānanda Sutta* with their modern perspective. The study was done by analyzing the authentic Buddhist and Ayurveda treatises viz. *Buddha Jayanti Tripiṭaka Grantha Mālā*, *Piruvānā Pot Vahanse*, *Caraka* and *Suśruta Samhitā* with reviewing the online research articles on ResearchGate, PubMed®, Google Scholar etc. By analyzing the aforementioned sources found that there are six *Āyatana* that can correlate with *Panca Jñānendriya* and one *Ubhaya Indriya (Mana)* mentioned in Ayurveda Ontology. Then 32 types of unattractive body parts (*Asubha Saññā/ Detis Kunapa*) with their respective Ayurveda correlations and 48 disease conditions described with well-organized etiological order are compared with both Ayurveda and allopathic perspectives. Also, there are equities in the definition of a healthy person and in some basic principles of Ayurveda such as *Pancamahābhūta* and *Tridoṣa* theory with relevant Buddhist literature. Therefore, came to a conclusion that there were many similarities can be found between Ayurveda Sanskrit literature and Buddhist *Pāli* literature regarding the medical aspect of human beings with special reference to *Girimānanda Sutta* in the aspect of Ayurveda *Śarīra Racanā*.

**Key words:** *Girimānanda Sutta*, *Śarīra Racanā*, *Ayurveda*, *Theravāda* Buddhism, Anatomy

## Introduction

In the 6<sup>th</sup> century B.C., a great teacher known as *Gautama Buddha* (523-443 BC) introduced a unique psychological system in theory and practice which also give attention to physical well-being in the context of achieving good mental and spiritual well-being (*Nibbāna*). The beginnings of this doctrine and practices are well preserved in Buddhism, as presented in the *Pāli Tripiṭaka* (consisting of *Sutta Piṭaka*, *Vinaya Piṭaka* and *Abhidhamma Piṭaka*).<sup>[1],[2]</sup> Buddhists believe that chanting of *Paritta/ Pirit* gives them some physical, mental and top of that spiritual well-being since it has an unseen or supernatural power of sound energy. *Pāli* meaning of *Paritta* is scriptures or phrases which are giving protection and blessings which are initially recited by the blessed one, the *Gautama Buddha*. Thereafter Buddhist monks, nuns and lay groups of people are chanting this *Pirit*.<sup>[3]</sup> *Girimānanda Sutta* comes under the, *Sutta Piṭaka /Āṅguttara Nikāya/ Dasaka Nipāta* as the 60<sup>th</sup> *Sutta*. *Śarīra Racanā* is considered as a main subject area of Ayurveda as it is described the structural organization human body in descriptive manner. Not only for the identification of anatomical variations in physiological and pathological states but also for the diagnosing of ailments according to the symptoms, the knowledge on *Śarīra Racanā* is essential. The *Cikitsā* or the treatment protocols especially in *Śalya and Śālākya Tantra* dependent on this anatomical knowledge in Ayurveda.<sup>[4]</sup> Since other all parts of a medical system depend on the Anatomy, the *Ācārya Suśruta* in *Śārīrasthāna* of *Suśruta Samhitā* elaborated the significance and value of anatomy for the betterment of both patient and the physician.<sup>[5]</sup>

## Methods and Materials

The present study was done to find out is there any similarities can be found between Ayurveda Sanskrit literature and Buddhist *Pāli* literature regarding the medical aspect of human beings with special reference to *Girimānanda Sutta* in the aspect of Ayurveda *Śarīra Racanā*. Objectives of the study were,

- To review and theoretically analyze the anatomical, physiological and pathological conditions mentioned in the *Girimānanda Sutta* as per the Buddhist *Pāli* literature.
- To correlate the concepts about ailments in *Pāli* literature of Buddhism with the Sanskrit literature in Ayurveda *Śarīra Racanā*.
- To develop the interconnection between Ayurveda medicine and ancient monastery medicine related to *Theravāda* Buddhism in India.
- To explore the use of Buddhist and Ayurveda holistic approaches and concepts in modern allopathic psychotherapeutics.

This review was done by referring to *Buddha Jayanti Tripiṭaka Grantha Mālā*, *Piruvānā Pot Vahanse* with *Śārīrasthāna* of *Caraka* and *Suśruta Samhitā* as a literature review. Also, the research articles on databases such as PubMed®, GoogleScholar, JSTOR, J-STAGE, ResearchGate, and online dictionaries on *Pāli* - English were used. Searching terms were *Girimānanda Sutta*, Ayurveda *Śarīra Racanā*, *Paritta*, and *Theravāda* Buddhism. The data was analyzed theoretically by using a formal and systematic evaluation of each term included in *Sutta* with Ayurveda/ modern anatomical correlations.

## Results

### Buddhist philosophy and literature

There are three major doctrine branches in Buddhism:

1. *Theravāda* - Way of the Elders
2. *Mahāyāna* - Greater Vehicle
3. *Vajrayāna* - Diamond Vehicle

*Theravāda* is the oldest version of Buddhism which believes in *Nibbāna*, that one can attain it by purifying the mind and renouncing all worldly pleasures. This branch follows the basic principles of the *Pāli* canon and large numbers of people in India, Sri Lanka, Myanmar, Thailand etc. are *Theravāda* Buddhists.<sup>[6]</sup>

### **Meaning of the word 'Paritta'**

- Concise Pali-English Dictionary by A.P. Buddhadatta Mahathera  
*Paritta* : [adj.]
  1. small ; insignificant ; little
  2. protection ; protective charm
- Buddhist Dictionary of Pali Proper Names by G P Malalasekera
  1. *Paritta* : A collection of texts taken from the *Khuddaka Pāṭha*, the *Anguttara Nikāya*, the *Majjhima Nikāya* and the *Sutta Nipāta*, and recited on special occasions to ward off illness and danger.
  2. The word '*Paritta*' means protection. The *Milinda-Pañha* (p.150)<sup>[7]</sup>

The word *Paritta* also refers to the collection of such texts, as well as to the ritual in which a collection of these texts or parts of them is recited. The ceremony was performed by followers of *Theravāda* Buddhism in ill health, natural calamity, or the blessing of a new house. Monks chant the texts while holding a ritual thread in their hands which is tied to various ritual implements, including a pot of water. After chanting, this is formally sprinkled with pure water (*Pirit Pan*) and the pieces of thread are tied around either the neck or the wrist.<sup>[8]</sup>

### **Various Paritta/ Pirit used for different purposes**

The specific uses can be obtained from the introductory verses of each *Sutta*. Apart from the *Girimānanda Sutta* and its specific purpose of chanting these is the other commonly used *Sutta* or *Paritta* for different purposes including protection.

- *Mangala Sutta* blessings and prosperity
- *Ratana Sutta* getting free from dangers caused by disease, evil spirits and famine
- *Metta Sutta* suffuses all kinds of beings with loving-kindness
- *Khandha Sutta* protects against snakes and other creatures
- *Mora Sutta* protection against snares, imprisonment and safety
- *Vatta Sutta* protection against fire
- *Dhajagga Sutta* protection against fear, trembling and horror
- *Atanatiya Sutta* against evil spirits, and gaining health and happiness
- *Angulimala Sutta* easy delivery for expectant mothers
- *Bojjhanga Sutta* protection against and getting free from sickness and disease
- *Pubbanha Sutta* protection against bad omens etc., and gaining happiness<sup>[9]</sup>

*Pirit* has a verbal power, proved by research studies while it has high levels of qualitative frequencies identified in chanting contrast to normal day-to-day speech by monks/ nuns.<sup>[10]</sup>



As mentioned in *Roga Sutta* and *Salleka Sutta*, every individual except *Arahat* (liberated monks from the world) suffers from mental disorders.<sup>[11], [12]</sup>

**Modern experimentally proved benefits of chanting Paritta**

Chanting and listening to *Paritta* provide physical and mental health benefits instantly. It is considered good for our health, broadens the mind to foster happiness, reshapes it to cultivate compassion, brain tissues are made thick and increase the cognition of the faculties which are responsible for attention and sensory processing. In the context of Global Recovery, listening to Buddhist *Pirit* chants, or making others listen to them for a period exceeding 10 minutes, would be immensely valuable in the recovery of the deteriorated status of the mind and health of an individual. Also, in research it has been proved that there are microscopic changes in normal water molecules (in the water pot or the *Pirit Pan Kalaya*) after the chanting of *Paritta*.<sup>[13]</sup>

**Relationship between Buddhism and basic principles of Ayurveda**

Placing the basic teachings of the Middle Way (*Majjima Paṭipadā*) between the two extremes of the universe, healing has become part of Buddhism by providing the means to maintain a healthy physical condition represented by a balance between the body and its environment.<sup>[14]</sup>

“*Ārogyaparamālābhā - santuṭṭhi paramaṃdhanam*  
*vissāsapuramāñati - nibbānam paramaṃ sukham*”

According to the above *Pāli* stanza, health is the highest gain. Happiness is the greatest wealth. Trust is the best relative while the *Nibbāna* is the supreme bliss. So, it is very clear that without this physical and mental health, the attainment of the highest mental purity of spiritual wellness; the *Nibbāna* is impossible. We can correlate this stanza with the definition of the “Healthy Person” mentioned in *Suśruta Samhitā* (“*Samadoṣa Samāgniśa...*”)<sup>[15]</sup> and the World Health Organization’s (WHO) definition of health as mentioned in Table 1.

**Table 1. Correlations of definitions of a healthy individual with *Pāli* literature**

<i>Pāli</i> stanza	WHO definition	Sanskrit stanza
<i>Ārogyaparamālābhā</i>	physical wellbeing	<i>Samadoṣa Samāgniśca</i> <i>Samadhātumalāḥ kriyā</i>
<i>Santuṭṭhi paramaṃdhanam</i>	mental wellbeing	<i>Prasanna ātmendīrya</i> <i>manaḥ (Svastha</i> <i>ityabhidhīyate)</i>
<i>Vissāsapuramāñati</i>	social well being	
<i>Nibbānam paramaṃ sukham</i>	spiritual wellbeing (not yet included in the WHO’s definition)	

Among the six *Kasiṇas* (*Paṭhavi, Āpo, Tejo, Vāyo, Ākāsa, Āloka*) and in *Abhidhamma* mentioned about the earth (*Paṭhavi*) water (*Āpo*), fire (*Tejo*) and wind (*Vāyo*) as four elements which are also mentioned under the Ayurveda *Panchamahābhuta Siddhānta* along with this four elements, the commentary, *Visuddhimagga* mentioned that there are three humours viz. phlegm, wind, and bile and equilibrium of these three and four elements causes proper functioning of the physical body, which is similar to Ayurveda *Tridoṣa* theory.<sup>[16], [17]</sup> the value of keeping in touch with the balance of three humors were described according to the early Buddhist expositions, this physical wellbeing of an individual is conducive to achieve healthful mentality.<sup>[18]</sup> Buddhism was a main factor in the development of the ancient



Indian medical systems especially the Ayurveda in the 9th century BC. As an example, adding Eastern medicine to the curricula of major monastic universities such as *Nālandā*, *Vikramaśilā* and *Takśilā* made it a scholastic discipline throughout India.<sup>[19]</sup>

### Ayurveda Śārīra Racanā

Ayurveda is an evidence-based science which is a *Upaveda* in *Atharva Veda* which supposed to be composed around seventh - eighth century BC.<sup>[20]</sup> As mentioned in the *Śabdasthoma Mahānidhi*;

“*Śu-Iran-Śhīryate anena iti Śārīram*”

‘*Śārīra*’ means to be rendered to pieces and conveys the idea underlying the catabolism.

Sincere efforts are essential to study and analyzing ancient textbooks as it is the base of Ayurveda treatments. *Śārīra Racanā* is one of the basic subject areas of Ayurveda. The physician who knows the number of various components of the body in their entirety does not associate himself with illusion which is caused by ignorance.<sup>[21]</sup> *Śārīra Racanā* has main branches such as *Marma Śārīra*, *Kala Śārīra*, *Srotas Śārīra*, *Sankhya Śārīra*, *Pramaṇamitiya* etc. The study of *Śārīra Racanā* refers to the study of anatomical structures which are described in Ayurveda and their correlations with modern medicine.<sup>[22]</sup> In *Suśruta Samhitā* the *Śārīrasthāna* is the best while in the *Caraka Samhitā Cikitsāsthāna* is considered as the best. But the same description can be found in both texts with slight differences regarding *Śārīrasthāna*.

Both *Caraka* and *Suśruta* describe *Aṅga* (major body parts). They are as follows;

1. *Śākhā* (4) – four limbs
2. *Madhya* (1) – trunk
3. *Śīras* (1) – head

Further, divided into minor body parts called *Pratyāṅga*; they are *Mastaka* (cranium), *Udara* (abdomen), *Prṣṭha* (back), *Nābhi* (umbilicus), *Lalāta* (forehead), *Nāsā* (nose), *Cibuka* (chin), *Vasti* (urinary bladder) and *Grīvā* (neck) each one in number. *Karṇa* (ear), *Netra* (eye), *Bhru* (eyebrow), *Śankha* (temporal), *Aṃsa* (shoulder), *Gaṇḍa* (cheek), *Kakṣa* (axilla), *Stana* (breast), *Vṛṣana* (scrotum), *Pārśhva* (flank), *Sphig* (gluteal region), *Jānu* (knee), *Bāhu* (upper arm) and *Uru* (thigh) each two in number, *Anguli* (fingers) 20 in number and *Srotas* (11 types). They are categorized as follows in Table 2.<sup>[23]</sup>

**Table 2. Classification of *Pratyāṅga* according to *Suśruta***

	<b>Ayurveda term</b>	<b>modern correlation</b>	<b>numbers</b>
1	<i>Snāyu</i>	ligaments	900
2	<i>Sirā</i>	veins	700
3	<i>Dhamani</i>	arteries	200
4	<i>Peśi</i>	muscles	400
5	<i>Marma</i>	vital parts	107
6	<i>Sandhi</i>	Joints	200
7	<i>Sirā Dhamani</i> <i>Anuroopa Mukha</i>	capillaries	29956
8	<i>Kesha</i> , <i>Smaśru</i> and <i>Loma</i> .	all types of body hairs	29956

*Ācarya Caraka*, the composer of *Caraka Samhitā* mentioned *Pratyamṅga* as in Table 3. Commentators of the present time have very well worked for correlating the *Koshthāṅga* presented by *Ācarya Caraka* with the structure described in modern anatomy viz. *Nābhi* (umbilicus), *Hrdaya* (heart), *Kloma* (pancreas), *Yakṛta* (liver), *Plīha* (spleen), *Vṛkka* (kidney), *Basti* (bladder), *Puriṣadharā* (sigmoid colon), *Amāśaya* (stomach), *Pakvāśaya* (duodenum), *Uttaraguda* (rectum), *Adharaguda* (anal canal), *Chhudāntra* (small intestine), *Sthulāntra* (large intestine), *Vapāvahana* (omentum).<sup>[24]</sup>

**Table 3. *Pratyamṅga* according to *Caraka Samhitā***

	<i>Pratyamṅga</i>	modern correlation	number
1	<i>Janghanapindaka</i>	calf regions	2
2	<i>Urupindaka</i>	thigh regions	2
3	<i>Sphik</i>	gluteal regions	2
4	<i>Vrushana</i>	testicles	2
5	<i>Shepha</i>	penis	1
6	<i>Ukha</i>	axillae	2
7	<i>Vankshana</i>	inguinal regions	2
8	<i>Kukundara</i>	ischial regions	2
9	<i>Bastishirsha</i>	mons pubis	1
10	<i>Udara</i>	abdomen	1
11	<i>Stana</i>	breasts	2
12	<i>Shleshmabhuvou</i>	thoracobrachial region	2
13	<i>Bahupindaka</i>	forearms / brachial regions	2
14	<i>Chibuka</i>	chin	1
15	<i>Oshtha</i>	lips	2
16	<i>Srakkani</i>	margins of lips	2
17	<i>Dantaveshtaka</i>	gums	2
18	<i>Talu</i>	palate	1
19	<i>Galashundika</i>	uvula	1
20	<i>Upajihvika</i>	tonsils	2
21	<i>Gojihvika</i>	glottis	1
22	<i>Ganda</i>	cheek regions	2
23	<i>Karnashashkuli</i>	auricles of ear	2
24	<i>Karnaputraka</i>	tragus	2
25	<i>Akshikuta</i>	orbits	2
26	<i>Akshivartma</i>	eyelids	4
27	<i>Akshikaninika</i>	pupils	2
28	<i>Bhruva</i>	eyebrows	2
29	<i>Avatu</i>	nucha	1
30	<i>Panipadahridaya</i>	palmar heart and planter hearts	4

## Discussion







On one occasion, The Buddha once lived near *Sāvatti* in *Jetavana* or *Anatpindika* monastery. At that time, *Girimānanda Thero* was suffering from an illness and was seriously ill.

"Should you, *Ānanda*, visit the monk *Girimānanda* and recite to him the ten *Saññā* (contemplations), then that Venerable *Girimānanda* having heard them will be immediate relief from disease.

"What are the ten (10) *Saññā*? They are,

- 1) The perception of impermanence (*Anicca Saññā*)
- 2) The perception of non-self (*Anatta Saññā*)
- 3) The perception of unattractiveness (*Asubha Saññā*)
- 4) The perception of danger (*Ādīnava Saññā*)
- 5) The perception of abandoning (*Pahāna Saññā*)
- 6) The perception of dispassion (*Virāga Saññā*)
- 7) The perception of cessation (*Nirodha Saññā*)
- 8) The perception of non-delight in the entire world (*Sabba Loke Anabhirata Saññā*)
- 9) The perception of impermanence in all conditioned phenomena (*Sabba Saṅkhāresu Anicchā Saññā*)
- 10) The mindfulness of breathing (*Ānāpānasati*)

**Figure 1. The six *Āyathana* according to Buddhism with their Ayurveda correlation**

	<p>Eye and vision is not-self</p> <ul style="list-style-type: none"> <li>• <i>Cakkhu Anattā - Netra</i></li> <li>• <i>Rūpā Anattā - Drishti</i></li> </ul>
	<p>Ear and sound is not-self</p> <ul style="list-style-type: none"> <li>• <i>Sotaṃ Anattā - Karna</i></li> <li>• <i>Saddā Anattā - Shabda</i></li> </ul>
	<p>Nose and smell is not-self</p> <ul style="list-style-type: none"> <li>• <i>Ghānaṃ Anattā - Nasa</i></li> <li>• <i>Gandhā Anattā - Gandha</i></li> </ul>
	<p>Tongue and taste is not-self</p> <ul style="list-style-type: none"> <li>• <i>Jivhā Anattā - Jihva</i></li> <li>• <i>Rasā Anattā - Rasa</i></li> </ul>
	<p>Body/ Skin and tactile sense is not-self</p> <ul style="list-style-type: none"> <li>• <i>Kāyā Anattā - Kaya</i></li> <li>• <i>Phoṭṭhabbā Anattā - Sparsha</i></li> </ul>
	<p>Mind/ intellect and ideas is not-self</p> <ul style="list-style-type: none"> <li>• <i>Mano Anattā - Manas</i></li> <li>• <i>Dhammā Anattā - Chethana</i></li> </ul>

After learning these ten concepts, *Ānanda Thero* left and told them to Ven. *Girimānanda*. He heard these and his pain was gone and recovered from his illness.<sup>[25]</sup> The similar *Pirit* chanting is mentioned under the 2<sup>nd</sup> *Banavāra* of *Piruvānā Pot Vahanse; Mahākassapathera Bojjhanga Sutta* for the relief of the physical persecution in Ven. *Mahā Kassapa Thero*.<sup>[26]</sup> Also, *Sivaka Sutta* states that *Karma* (good and bad acts) is the only cause of how somebody feels pain and sickness in the present life.<sup>[27], [28]</sup> The one and only Ayurveda *Pāli* publication available at present, the *Bhesajjamañjusā* instructs to establish physical health by giving

priority to good mental health. In Ayurveda, all physical illnesses are related to the imbalance of the three humors - *Vāta*, *Pitta* and *Kapha*. The *Visuddhimagga* mentions that these three humors are connected with mentality as follows: greed - *Kapha*, hatred - *Pitta* and delusion - *Vāta*. Many other factors affect physical health, such as environmental conditions, food patterns, mental health plays an important role in balancing physical well-being.<sup>[29]</sup>

Lord Buddha said that, from the soles of the upper part of the feet, from the crown of the lower part of the head, surrounded by skin filled with all sorts of unclean things. They are mentioned in Table 4 as thirty-two (32) types of *Kuṇapa*/ the perception of unattractiveness (*Asubha Saññā*).

**Table 4. Thirty-two types of unattractive body parts with Ayurveda and modern correlations**

	body part	Ayurveda correlation	modern correlation
1	<i>Kesā</i>	<i>Kesha</i>	hair
2	<i>Lomā</i>	<i>Roma</i>	body hair
3	<i>Nakhā</i>	<i>Nakha</i>	nails
4	<i>Dantā</i>	<i>Danta</i>	teeth
5	<i>Taco</i>	<i>Tvacha</i>	skin
6	<i>Mamsaṃ</i>	<i>Mamsa</i>	muscles
7	<i>Nhāru</i>	<i>Snayu</i>	nerves / tendons
8	<i>Aṭṭhi</i>	<i>Asthi</i>	bones
9	<i>Aṭṭhimiñjaṃ</i>	<i>Majja</i>	bone marrows
10	<i>Vakkaṃ</i>	<i>Vrikka</i>	kidneys
11	<i>Hadayaṃ</i>	<i>Hridaya</i>	heart
12	<i>Yakanaṃ</i>	<i>Yakrith</i>	liver
13	<i>Kilomakaṃ</i>	<i>Pleeha</i>	spleen
14	<i>Pihakaṃ</i>	Not Found	Not Found
15	<i>Papphāsaṃ</i>	<i>Puppusha</i>	lungs
16	<i>Antaṃ</i>	<i>Antra</i>	intestines
17	<i>Antagaṇaṃ</i>	Not Found	mesentery
18	<i>Udariyaṃ</i>	<i>Amashaya</i>	stomach/ gorge
19	<i>Karīsaṃ</i>	<i>Varcha/ Purisha</i>	feces
20	<i>Pittaṃ</i>	<i>malabhuta Pitta</i>	bile/ gall
21	<i>Semhaṃ</i>	<i>Malabhuta Kapha</i>	phlegm
22	<i>Pubbo</i>	<i>Puya</i>	pus/ lymph
23	<i>Lohitaṃ</i>	<i>Rakta</i>	blood
24	<i>Sedo</i>	<i>Sveda</i>	sweat
25	<i>Medo</i>	<i>Medas</i>	fat
26	<i>Assu</i>	<i>Asru</i>	tear
27	<i>Vasā</i>	<i>Vasa</i>	oils
28	<i>Kheḷo</i>	<i>Keta</i>	saliva
29	<i>Siṅghāṇikā</i>	<i>Sleshma</i>	mucus/ snot
30	<i>Lasikā</i>	<i>Lasika</i>	synovial fluid
31	<i>Mutta</i>	<i>Mutra</i>	urine
32	<i>Matthalungha</i>	<i>Masthishka</i>	Brain tissues

This body has many pains and drawbacks as mentioned in the perception of danger (*Ādīnava Saññā*) of *Girimānanda Sutta*. In this body, many kinds of diseases arise. They are summarized in Table 5 with their Ayurveda and modern correlations. Here, the Lord Buddha mentioned various ailments in that era and the etiology of the ailments such as imbalance of *Pitta* (bile), *Semha* (phlegm), *Vata* (air), *Sannipatika* (combination of humours), *Utuparinamaja* (seasonal changes), *Visamapariharaja* (adverse/ misuse of the body or careless behaviors), *Opakkamika* (from devices/ assaults or violence), *Kammavipakaja* (as a result of previous sinful acts) and *Sītam* (cold), *Unham* (heat), *Jigacchā* (hunger), *Pipāsā* (thirst), *Uccāro* (defecation), and *Passāvo* (urination).<sup>[30]</sup>

**Table 5. Disease conditions mentioned in *Girimānanda Sutta***

	disease condition	Ayurveda correlation	modern correlation
1	<i>Cakkhu roga</i>	<i>Akshi Roga</i>	diseases in eyes
2	<i>Ghāna roga</i>	<i>Nasa Roga</i>	diseases in nose
3	<i>Jivhā roga</i>	<i>Jihva Roga</i>	diseases in tongue
4	<i>Sīsa roga</i>	<i>Shiro Roga</i>	diseases in head
5	<i>Kaṇṇa roga</i>	<i>Karna Roga</i>	diseases in ears
6	<i>Mukha Roga</i>	<i>Mukha Roga</i>	diseases in oral cavity
7	<i>Danta Roga</i>	<i>Danta Roga</i>	diseases in teeth
8	<i>Kāya roga</i>	<i>Sarvanga Roga</i>	generalized diseases
9	<i>Kāso</i>	<i>Kasa</i>	cough
10	<i>Sāso</i>	<i>Shvasa</i>	asthma
11	<i>Pināso</i>	<i>Peenasa</i>	catarrh/ cold
12	<i>ḍāho</i>	<i>Daha</i>	burning sensation
13	<i>Jaro</i>	<i>Jvara</i>	fever
14	<i>Kucchi rogo</i>	<i>Kukshi roga</i>	stomach-ache
15	<i>Mucchā</i>	<i>Murchcha</i>	fainting
16	<i>Pakkhandikā</i>	<i>Athisara/ pravahika</i>	dysentery
17	<i>Sūlā</i>	<i>Shula</i>	grippe/ piercing pain
18	<i>Visūcikā</i>	<i>Visuchika</i>	cholera
19	<i>kuṭṭhaṃ</i>	<i>Kushta</i>	leprosy
20	<i>gaṇḍo</i>	<i>Gandamala</i>	boils
21	<i>Kilāso</i>	<i>Kilasa</i>	ringworm/ plague
22	<i>Soso</i>	<i>Shosha</i>	tuberculosis/ phthisis
23	<i>Apamāro</i>	<i>Apasmara</i>	epilepsy
24	<i>Daddu</i>	<i>Dadru</i>	skin-disease/ herpes
25	<i>kaṇḍu</i>	<i>Kandu</i>	itching
26	<i>Kacchu</i>	<i>Dadru</i>	scab/ ringworm
27	<i>Nakhasā/ rakhasa</i>	<i>Kitibha</i>	psoriasis/ small pox
28	<i>Vitacchikā</i>	<i>Vicharchika</i>	scabies
29	<i>lohitaṃ pittaṃ</i>	<i>Raktapitta</i>	jaundice/ pustules
30	<i>Madhumeho</i>	<i>Madhumeha</i>	diabetes
31	<i>aṃsā</i>	<i>Arshas</i>	hemorrhoids
32	<i>piḷakā</i>	<i>Pidaka</i>	ulcers/ cancer
33	<i>Bhagandalā</i>	<i>Bhagandara</i>	fistula-in-ano

These total forty-eight (48) types of ailments are narrated in the *Girimānanda Sutta* according to etiology, location and nature of the ailment. The main four etiological classifications is described as follows,

1. **Utuparināmajā ābādhā:** *Utu* the word means the seasons, which is one among the five *Niyama Dhamma*. Here it refers to the unhealthy seasonal and environmental changes that can result in a disease condition. These seasonal or climatic changes are the alterations of previously supporting climates. Also, this can indicate unhealthy socio-economic factors, environmental pollution, and dangerous working/ living conditions. This can be correlated to the deviations from *Ritu Charya* mentioned in Ayurveda *Svastha Vritta* or positive health regimes
2. **Visamaparihārajā ābādhā:** When a person fails to take care of his mind and body and neglects his mental and physical well-being. Due to that, his positive health may deteriorate and he may become ill. Examples are a sedentary lifestyle without proper physical work, malnutrition, using illicit drugs, and not suppressing mental emotions like grief, anger, greediness etc. *Asātmendriyārtha Samyoga* and *Pranjāparādha* come under this category
3. **Opakkamikā:** Legal issues including violence or assaults, animal bites, attacks by enemies or robbers, self-harm accidents and more. Diseases happening according to *Agantuja Nidana* or external causes as per Ayurveda.
4. **Kammavipākajā ābādhā:** The karmic effect of disease and health are spelled out in the *Culakammavibhaṅga Sutta* (the shorter discourse of action) of the *Majjhima Nikāya*. According to this *Sutta*, He who causes injury or suffering to living beings in this life, then, wherever he is reborn, he is sick, subject to disease - as a result of such evil deeds. *Karmaja Roga* such as *Bhagandara* and *Kushtha* in Ayurveda can correlate with this. <sup>[31]</sup>

### **Limitations of the study**

Several limitations of this study were found. That only the *Anatta Saññā*, *Asubha Saññā* and *Ādīnava Saññā* among the ten (10) medications for the sick or the *Girimānanda* discourse was selected. Also from authentic Ayurveda treatises, the *Śārīrasthāna* of *Caraka* and *Suśruta Samhitā* were inclusively selected. Since the other parts of *Sutta* and Ayurveda textbooks are not relevant to the physical well-being and anatomy of the human being they were not considered.

### **Conclusion**

According to the above research findings, this qualitative study gives a clue about the tremendous influence of Buddhism on Ayurveda literature. All forms of body parts described in *Girimānanda Sutta* in Buddhism are included in most of the parts of Ayurveda *Śarīra Racaṇā* (Anatomy). Diseases and categorization of disease in *Sutta* are comparatively matched with the Ayurveda perspective with the relation to fundamentals of Ayurveda *Śarīra Racaṇā*. Therefore, it is evident that the great holistic medical system in India, the Ayurveda had an influence in *Theravāda* Buddhism and there are so many similarities in those two philosophies in the aspect of Ayurveda Anatomy. So, we can doubtlessly study and use this knowledge of two pathways, for learning the medical conditions in the Ayurveda medical field.



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## BIOCHEMICAL EFFECT OF OBESITY ON MALE INFERTILITY

D. A. L. Munasinghe

### Abstract

Obesity is considered a global health issue affecting more than a third of the population and it may lead to various complications such as diabetes mellitus (type 2), cardiovascular diseases, prostatic carcinoma, osteoarthritis, accelerated ageing, neurodegeneration and infertility/subfertility in both male and female. Obesity of male can affect negatively on the quality of important seminal parameters such as sperm count, motility and morphology. This review study was launched to find out the biochemical mechanism of the effect of obesity on seminal parameters hence the male infertility. Based on the review result, it is proved that obesity has a negative effect on the quality of seminal parameters mainly on sperm count and motility. Due to the fact that these two parameters play an important role in male fertility, obesity has a negative impact on male fertility. Furthermore, the outcome of the review study could be considered as a platform for launching further researches on the topic and to consider the weight management more and more in the treatment regime of male infertility. Moreover, weight management may prevent certain other pathological conditions as well. This could be an additional advantage for the infertile/sub fertile patients.

**Keywords:** male obesity, biochemical mechanism, insulin, leptin, seminal parameters

## Introduction

As a major health problem, obesity has reached epidemic extents worldwide. According to the WHO reports, nearly 650 million people were obese and more than 1.9 billion were overweight in 2016 worldwide <sup>[1]</sup>. Obesity is associated with the deposition of an excess amount of fat in the body. Adipose tissue which is located under the skin and intra-abdominal, is the layer which contains body fat. Quetelet index (BMI), and measurements of waist circumference can be used to detect the body fat <sup>[2]</sup> and body fat topography <sup>[3]</sup> respectively. People with a BMI of  $\geq 30$  kg/m<sup>2</sup> are considered as obese <sup>[2]</sup>. However, waist circumference is currently suggested as a more accurate marker of obesity

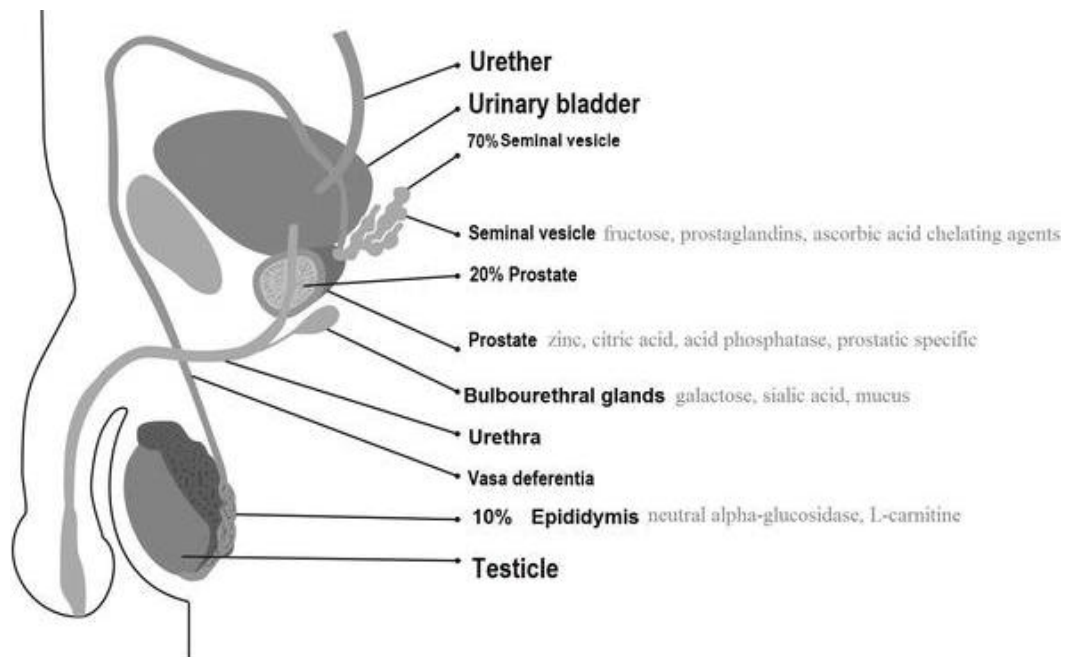
It has been found in certain research studies that obesity has been associated with several health risk conditions such as hypertension, high low density cholesterol level (LDL) and/or triglyceride level (TG), type 2 diabetes, coronary heart disease, stroke, gallbladder disease and also with infertility. Regarding human infertility, human beings are affected equally by obesity regardless of their sex. According to statistics, the prevalence of male infertility is 7% <sup>[4]</sup> and this is on the rise and continues to be an issue for many. Thus, paying attention on this is mandatory. Basically, male infertility depends on the alteration of the quality of semen.

Semen is a semisolid liquid produced by the organs of the male reproductive system. It is white, opalescent, slightly alkaline viscous fluid (pH between 7.35 to 7.50). The semen comprised of cells (spermatozoa) and the fluid (seminal plasma). The spermatozoa are synthesized by the testis of the male reproductive system and the seminal plasma is made up of various tubules and glands of the reproductive system such as prostate, seminal vesicles, bulbourethral glands. As the function of the seminal plasma, it helps keep the sperm alive. Further, the seminal fluid represents the largest portion of semen and its around 95%, the cellular composition represent the rest <sup>[5]</sup>.

As it was mentioned, spermatozoa or sperm originates in the testes from the germ cells of the seminiferous epithelium. The process is called as spermatogenesis. The human male is able to ejaculates 200 to 300 million sperms during a coitus <sup>[5]</sup>. The sperm which is microscopic in nature composed of a head, a middle piece and a tail. The whole body of the sperm is covered by a plasma membrane. The head of the sperm contains an elongated haploid nucleus and anterior portion of it is covered by a cap like structure called the acrosome which contains the lysosomal enzymes needed for the fertilization of the ovum. Middle piece contains numerous mitochondria (power houses), which supply energy (ATP) for the cell. Sperm tail is thin and elongated and making 80% of the entire length of the sperm which helps in motility <sup>[5]</sup>. Thus, the cellular portion forms about 2-5% of the semen composition.

The Seminal plasma or the fluid portion of the semen is a complex liquid and made up of the secretions of the seminal tract and seminal glands. As the main function, seminal plasma serves as the vehicle for transporting already ejaculated spermatozoa. Moreover, it provides protection and nutrition to the spermatozoa during their onward movement in the female reproductive tract (vagina and uterus).

When it comes to the formation and maturation of spermatozoa, the seminiferous tubules of the male testis generate sperm cells and the epididymis helps to store them. Electrolytes such as sodium, potassium as well as energy sourcing glyceryl phosphorylcholine are added to the sperm in the epididymis. In epididymis sperm become mature and enter another storage area called the ampulla which is a part of vas or ductus deferens. The ampulla secretes a yellowish fluid which has ergothioneine, a substance which removes oxygen and also secretes fructose which nourishes the sperm. During the ejaculation secretions from the prostate gland and seminal vesicles are added. These secretions dilute the semen concentration and provide a suitable environment for sperm cells. The seminal vesicle secretes seminal fluid which has a contribution of 50-65% of the seminal volume <sup>[5]</sup>. This fluid contains amino acids, citric acids, fructose, potassium, phosphorus, and hormones such as prostaglandin.



**Figure 1: Accessory glands of the male reproductive <sup>[5]</sup>**

The prostate gland contributes 20-30% of the semen volume and it adds acid phosphatase (an enzyme), calcium, zinc, sodium, potassium, proteolytic enzymes (serine proteases) and fibrolysin (an enzyme which reduces blood and tissue fibers). These enzymes and proteins assist in coagulation and subsequent liquefaction of semen. Coagulation helps semen to be as a semisolid mass in the vagina and liquefaction of it after around 30 minutes assist in sperm to move up along the vaginal wall easily. Most of the immunoglobulin (secretory Ig-IgA) present in the semen are produced by the prostate. The bulbourethral gland produces galactose, sialic acid and mucous which act as lubricant for semen. These components make up to 5% of the volume of the semen <sup>[5]</sup>. The seminal plasma along with the sperm finally forms the semen. Thus, in the ejaculation nearly 2-3 ml of semen is emerging which is white or opalescent in color.

The basic function of the semen is as follows;

- Containing of sperm/ spermatozoa which are used in fertility
- Survival of sperms with fructose and other enzymes
- Creation of alkaline buffered medium in the vagina
- Coagulation of the sperm cells
- Coating the sperm cells with capacitation inhibitors
- Facilitating sperm to move by proteolysis
- Activation and motility of the sperm cells
- Promote successful fertilization

There are several parameters which determine the quality of semen. Out of them four are considered as main parameters which determine the quality. Those main seminal parameters are the volume of semen, sperm count, sperm morphology and sperm motility. According to the WHO guidelines (2010) <sup>[6]</sup> the lower reference volume of semen is 1.5 ml. The normal reference sperm count is 15 million sperms per milliliter of semen. Basically, the sample which contains 4% <sup>[6]</sup> of normal morphological sperm cells would be considered as morphologically normal if the relevant male was able to make his partner pregnant within 1 year. Additionally, the value of sperm motility should be higher than 50% per milliliter of semen to be a quality semen.

According to certain studies, it is disclosed that the obese males are more prone to be infertile <sup>[7]</sup>. More overly the scientists have pointed out the possible theories of affecting obesity on seminal parameters. In this review study, it is to point out the biochemical way of affecting of obesity on the quality of seminal parameters hence the male infertility. The outcome of the survey would be more important for the respective clinicians who are involved in the male fertility subjects to consider about weight management of the client in the fertility treatment regime.

## Methods and Materials

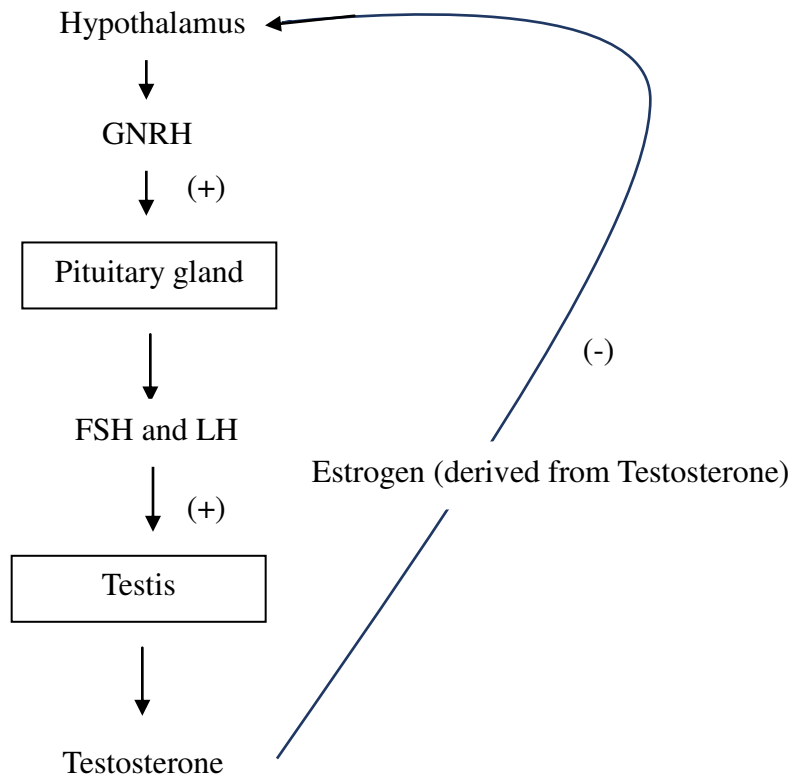
This literature review study was made basically on the articles pertaining to obesity and male infertility. Thus, to gather the information on the topic; online journals, online magazines, relevant websites and published books (Library of the Faculty indigenous Medicine, University of Colombo) and book chapters were searched and screened during the period of December 2022 to March 2023. All the gathered information was reviewed and analyzed to find the biochemical association of obesity on male factor infertility hence, to determine the way of biochemical mechanisms.

## Results and Discussion

The obesity of male affects the quality of seminal parameters negatively via various biochemical pathways. The gene of the DNA of spermatozoa contains the genetic information. The high level of insulin found in obese male can make fragmentation of DNA, which can decrease the fertile ability of sperm <sup>[8]</sup>. In addition, high level of blood insulin can also slow down the liver synthesis of testosterone transporting globulin, which ultimately can cause for inadequate availability of hormone in the testicular region. Testosterone is essential for synthesis and maturation of

spermatozoa in testis. Thus, according to the previous research studies, obesity can make poor quality semen via affecting sperm count (oligospermia) and morphology (teratospermia).

The level of oestrogen (a female hormone) in obese is rather higher than that of the normal males. The higher fat cell mass in white adipose tissues found in obese men secretes the enzyme called aromatase cytochrome P 45, which can convert androgen to oestrogen (aromatization of androgen). As elevated oestrogen levels prevent the synthesis of testosterone via negative feedback on the hypothalamus, the phenomenon may affect negatively on spermatogenesis<sup>[9]</sup>. This phenomenon of high estrogens in obese men has been mentioned by Daniel A. Potter, a Consultant Gynecologist in Huntington Reproductive Center in California and confirmed by a WHO study in 2009. This finding also proves that obesity makes poor sperm count (oligo spermia) via affecting male sex hormone testosterone.



**Figure 2: The negative effect of estrogen on the production of testosterone**

Obese or overweight subjects may suffer from various social issues such as frustrations on a self-figure, sexual disturbances due to obesity, sleep disturbances (sleep apnea) due to respiratory issues, and certain other marital problems as well. These may cause to stress on them, which can again alter the level of testosterone, which is essential for spermatogenesis<sup>[9]</sup>. This finding describes another cause of less availability of male sex hormone in obese. Hence, this fact also may cause to oligospermia.

Further, obese males often tend to reduce physical activities which are necessary for synthesizing testosterone. Moreover, the sleep apnea result in obesity may lead to hypoxia, which could reduce the availability of oxygen to testis. For a successful spermatogenesis it requires a good oxygenation and a low temperature environment<sup>[9]</sup>. In the normal healthy individuals this is met by maintaining the scrotum out of the body. Anyway, the elevated scrotal temperature usually found in obese individuals, affect negatively on proper spermatogenesis<sup>[10]</sup> which ultimately could leave to oligospermia.

Leptin, which is a protein produced by white adipocytes<sup>[9]</sup> plays an important role in controlling food intake and energy expenditure, as well as the regulation of reproductive function. When the level of leptin elevates it affects on the brain to decrease the intake of food. Further, excess leptin also decreases the function of Leydig cell, hence the production of testosterone. Thus, the higher level of leptin, which found in obese male may affect badly on spermatogenesis. Leptin can damage the sperm cells also. Thus, high dose of Leptin found in obese may cause to oligospermia and teratospermia.

Excessive fat in the thigh and skin folds which covers the genital region are also a problem for the obese men in synthesizing sperms<sup>[11]</sup>, as the scrotum and testis are overheated by the insulating effect of fat.<sup>[9]</sup>

Obesity is also associated with increased oxidative stress in the testicles<sup>[9]</sup>. High oxidative stress is consequence due to relatively high stress and high basal metabolic rate (BMR) seen in obesity. Though, the spermatogenesis process is not impaired, free radicals can damage sperm following production via attacking (crosslinking) DNA or peroxidation of membrane of sperm and their mitochondria.<sup>[12]</sup> Thus, the factor led to teratospermia and oligospermia.

There is a high ability to solubilize and get accumulated of lipid soluble environmental toxin in the adipose layer<sup>[13]</sup> of obese individuals which also can be toxic on sperm production.<sup>[9]</sup> The environmental toxin affects not only for male but also on the fertility of female.

## Conclusion

According to the outcome of the review study, it is clear that variations in several biochemical and physical factors, such as high insulin, high leptin, high oxidative stress, high temperature, and high environmental toxins, which are fairly common in obese males, cause poor-quality semen via various biochemical mechanisms. Moreover, it's clear that obesity basically affects the sperm formation process negatively, hence the count of sperm in the semen. This is confirmed in other similar review studies, which also concluded that obese men are three times more likely to have oligospermia, a sperm count of fewer than 15 million/mL, compared to healthy men with a normal weight.

Thus, this finding could be a good platform for doing more research on the topic. Furthermore, it is better if clinicians who work on male fertility pay them much attention on male obesity as a causative factor of male infertility or subfertility. Finally, more researches should be carried out on the topic considering the present review study as a platform.



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