UNDERSTANDING KAPHA AVRUTTA PRANA W.S.R. TO PATHOPHYSIOLOGY OF COPD (CHRONIC OBSTRUCTIVE PULMONARY DISORDER)

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ABSTRACT
In Ayurveda Avarana is discussed as one of the most basic complicated unique concept. Vata possesses property of Chala (“Tatra Va gatigandhanyo vayu”) which is responsible for all its function. Five different sub types of vata works differently at different places. Respiration is one of function of Prana vayu. Uraha Pradesh and Kantha Pradesh are sanchar sthana of vayu. Uraha also sthana of Kaph. If Avarana of Pran vayu with other Dosha like Kapha takes place in this region it can produces chronic Respiratory diseases like COPD. Chronic Obstructive pulmonary disease is one of the chronic disorders of respiratory system. If Diagnosis and treatment of COPD is done in context of Avarana then chronicity of disease can be reduced.

Keywords: Avarana, Avrutta, Kapha Avrutta Prana, COPD

INTRODUCTION
In Ayurveda concept of AVARANA is discussed with utmost importance. Many chronic disorders described in Ayurveda like Sandhigat vata, Aamvata, Shwasa are due to Vata Prapoka. This Vata prapoka is due to Margavrodha (encapsulation) and Dhautu Kshaya (depletion of Dhatu)¹. So normal Utsaha etc functions of Vata are retarded/obstructed². This Kshaya or Margavrodha leads to pathology of Avarana. Various type of manifestation of diseases are being explained in Granthas. Avarana is one of the basic fundamental concepts of Ayurveda. It is helpful to discuss pathophysiology of many complicated diseases. Most of the time Avarana of vata in many diseases remain unidentified due to lack of keen observation of symptoms so understanding samprapti of Avarana can help to prepare a line of treatment as Samprpti Bhang. In modern medicine chronic disorders are treated according to symptoms only and there is no any management to break pathophysiology of particular chronic disorders. So patients do not have long term relief from that chronic disorder. Chronic obstructive pulmonary disorder is common one among them in which there is chronically poor air flow.³ It is observed that there is obstruction to the air
flow due to excess production of cough and mucus which produces symptoms which mimics Kapha Avrutta Prana. Here there is something which is Vikriti Vishama Samavaya which helps to understand Kapha Avrutta Prana.

CONCEPT OF AVARANA

Avarana literally means obstruction or to cover. Vata generally possess property of CHALA which is responsible for all its functions. In Avarana two or more entities obstruct each other and make irreversible chemical bonding which produce diseases. In any sort of Avarana, there may be two components. One is Avrutta Dosha which functions gets hampered and second one is Avaraka dosha which is obstructing the functioning of particular Dosha as in kapha Avrutta pran. Avrutta dosha is pran as its normal functions like shthivan, Kshavathu, Nishwas are hampered and Kapha is Avaraka as it is obstructing the prana. There are different types of Avarana present. Chala gati of Vata gets affected by other two dosha or any one of seven dhatus or three malas(anya Avarana) or Pitta and Kapha obstruct Pranadi pancha vata(Vishishtha Avarana) or Paraspara Avarana. Either vrudhi or kshaya of particular dhatu produces Vata Vyadhi as in Vata rakta vrudhi of certain dhatu produces disease pathology Dhatu kshaya results in formation of anonya Avarna. Avarana can be classified as have 3 types.

1. Doshaavritta Vata caused by failure to control of flowing fluids.
2. Dhatu avritta vata caused by failure to control metabolic transformation.
3. Paraspara Avrutta caused by failure of nervous control

CONCEPT KAPHA AVRUTTA PRANA:

In Kapha Avrutta Prana there is involvement of Prana Vayu and Kapha. Both of them are individually described as follow.

PRANA VAYU: It is one type of vata. It stays in shirah but uraha and kantha ara sanchar sthan of it.

KARMA: Hrudaya Budhi, Indriya chittadharana ,Shthivan, Shwas are main functions of it. Act of respiration is described by Sharangdhara as Nabhistha Prana Vayu goes outside body takes Amber piyush comes again into body supplies it to all over body. So any obstruction in its flow may produce respiratory disturbances.

KAPHA DOSHA: Uraha and Kantha are sthanas of kapha Dosha.

KARMA: Sthiratwa and Snigdhatwa are main properties of kapha Dosha. Agnimandya causes production of sama styana Kap which may make Avarodha in pranvaha strotas.

KAPHA AVRUTTA PRAN: Functions of both dosha in Avarana get hampered due to their own Nidana. Due to production styan kapha and its deposition in uraha and kantha pradesha there is obstruction to the sanchar of pran vayu so normal function of prana gets hampered. So avrutta saam kapha produces excess sthivan, kshavathu,vaman and nishwas uchwas Sangraha. So this Type Vishistha Avarana that is Kapha Avrutta Prana presentations resembles COPD.

COPD: It is chronic airway disease it is combination of chronic bronchial Asthma and emphysema. Main causes of COPD are Smoking, Air pollution, occupational exposure.

It is obstructive lung disease in which incompletely reversible air flow and
inability to breath out fully exist. The poor air flow is result in breakdown of lung tissue (emphysema) and obstructive bronchitis.³

**PATHOPHYSIOLOGY OF COPD AND KAPHA AVRUTTA PRAN**

In both of these conditions pathophysiology of obstruction remains same.

1: COPD is develop as significant and chronic inflammatory response to the inhaled irritants like tobacco smoke, air pollution, and genetic causes.³ This Chronic inflammation can be assumed as Agnimandya due to Hetu Sevan. This Agnimandya is responsible for production of Styana Kapha.¹²

2: The inflammatory cells involved are neutrophils and macrophages. It causes narrowing of air passage. Due to infiltration of inflammatory cells mucus glands get stimulated in the airways which produce mucus. Both this narrowing and formation of thick mucus in airways make hard to breath.¹³ Low oxygen level and high co2 level in blood can occur from poor gas exchange due to decreased ventilation from air way obstruction. Hyperinflation (increase in total volume of air in lung due to inability to breath out fully)

This can be similar to accumulation Styana Kapha in Uraha Pradesh and Kantha Pradesh. This accumulation of Styana Kapha produces obstruction to Sanchra of prana vayu and hampers all its function.

3: Tobacco smoke produces free radicals which produces oxidative stress.³ This oxidative stress causes destruction of connective tissue of lung. Due to this walls between many of air sacs are damaged causes fewer and large air sacs instead of tiny one. If this happens, amount of gas exchange in the lungs is reduced. This poor gaseous exchange causes low oxygen level and high co2 level in the blood.³ This can be correlated with Kathinya produced in Pranvaha Strotasa. This Kathinya might be causing obstruction to the process of respiration done by Nabhistha prana described by Sharangadharara (reduced and poor gaseous exchange).

**SYMPTOMS:**

<table>
<thead>
<tr>
<th>Kapha Avrutta Prana¹⁴</th>
<th>COPD³</th>
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<tbody>
<tr>
<td><strong>Sthivan</strong></td>
<td>Excess sputum production</td>
</tr>
<tr>
<td></td>
<td>Excess cough</td>
</tr>
<tr>
<td><strong>Uchwas nishwas sangraha</strong></td>
<td>Shortness of breathing</td>
</tr>
<tr>
<td><strong>Vaman</strong></td>
<td>Haematemesis¹⁵</td>
</tr>
<tr>
<td><strong>Tandra</strong></td>
<td>Brief un consciousness due to excess cough</td>
</tr>
</tbody>
</table>

**DISCUSSION:**

If Avarana of Pran vayu with other Dosha like Kapha takes place in this region it can produces chronic Respiratory diseases like COPD. Chronic Obstructive pulmonary disease is one of the chronic disorders of respiratory system. If Diagnosis and treatment of COPD is done in context of Avarana then chronicity of disease can be reduced. so understanding samprapti of Avarana can help to prepare a line of treatment as Samprpti Bhang. In modern medicine chronic disorders are treated according to symptoms only and there is no
any management to break pathophysiology of particular chronic disorders.

**CONCLUSION:** From above finding it can be concluded that symptoms as well as pathophysiology of *kapha Avruatta Vata* can be correlated with COPD. If this will be taken into mind and other factors like *prakruti, Desha, Dushya of Rugna* are considered it can be helpful to do *Samprapti Bhanga* of COPD.

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