VIBANDHA IN CHILDREN: AN ETIOPATHOLOGICAL REVIEW

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ABSTRACT

Vibandha in children is one of the very common clinical conditions presenting with difficulty in defecation, infrequent bowel movements and hard stool. It can be correlated to constipation as explained in contemporary system of medicines. About 3% and 10% of visits to health centers and up to 25% of referrals to pediatric gastroenterologist are related to constipation only. The peak incidence of constipation is at 2–5 years of age. Majority of the children report constipation either due to habitual reasons or reduced intake of fiber and water and sometimes as a result of altered food and lifestyle habits. This article is to identify the causes and their role in leading to Vibandha, along with the probable clinical manifestation.

KEYWORDS: Ayurveda, Vibandha, Constipation.

INTRODUCTION

Vibandha is one of the very common clinical conditions presenting with difficulty in defecation, infrequent bowel movements and hard stool.¹,² Direct and explicit description of Vibandha as a disease is not found in Ayurveda but different presentation of Purisha (faeces) like Baddha Purisha, Ghana Purisha/Grathita Purisha, Sushka Purisha, Mala avabaddha are found in different contexts of Ayurveda.³ These can be taken as various manifestations of Vibandha. Vibandha occurs because of vitiation of Apanavata (sub type of vata).³ and it is
considered as a prominent symptom in most of the Annavaha and Purishavahasrotovikaras (Gastro intestinal tract).\(^4\) of children.

Vibandha can be correlated to constipation as explained in contemporary system of medicines. And it is one of the commonest gastro-intestinal complaints in children, which has recently grown to quite a proportion in public health problem. In the present scenario, about 3% and 10% of visits to health centers and up to 25% of referrals to pediatric gastroenterologist are related to constipation only.\(^5\) The peak incidence of constipation is at 2–5 years of age, as they are very fussy eaters (junk foods) and intake no/less fiber diet, less water intake. Common Outpatient prescriptions for Vibandha are mostly habituating, thus many people approach Ayurveda for the management. Hence it becomes essential to know about Vibandha in detail before planning for the treatment.

**MATERIAL AND METHODS**

Strategic searching of ayurvedic literature as well as contemporary science is done, to gather the knowledge about the Vibandha and its manifestation. Review includes ancient classical texts-Samhita, Nighantu’s, Online Researches, Previous Dissertation and Published Articles.

**REVIEW OF VIBANDHA**

1. **Vibandha in literature**

The term Vibandha is derived from two word ‘vi’and ‘bandha’ that means to Binding of stools. Other contextual references of Vibandha convey the meaning as ‘To bind’,\(^6\) ‘to encircle’,\(^6\) ‘Constipation’,\(^7\) ‘Obstruction’,\(^8\) and ‘obstruction of faeces & urine’.\(^22\)

Further, the dosha present in the srotas (channels) becomes Ghana (solidified state), which in turn causes obstruction to flatus, urine and faeces by binding them and hampering their normalcy.\(^9,10\)

Thus vibandha can be understood as a condition manifesting as a result of obstruction to faeces by the solidification of dosha (functional units of the body), vaigunya of apanavata (sub type of vata) in pakuwashaya (colon) and agnidushti (Impairment in the digestive fire).
Table 1: Contextual references of Vibandha.

<table>
<thead>
<tr>
<th>Nidana</th>
<th>Hikka (hicups), swasa (dyspnoea), Udavartha (retrograde intestinal movements), Parikarthika (anal fissure), Arshas (hemorrhoids)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poorva Roopa</td>
<td>Arshas, Parikarthika, Swasa</td>
</tr>
<tr>
<td>Roopa</td>
<td>Antarvegijwara (sub type of fever), Sannipatijwara (Fever due to vitiation of all three dosha), Vatajagulma (sub type of abdominal mass), Vatodara, Baddhagudodara, sahaja Arshas (congenital hemorrhoids), Vaataja Arshas (sub type of hemorrhoids), Vaataja Atisaara (sub type of diarrhea), Udavartha, Amashayagata vata, Pakwashayagata vata, Mala Avrutavata, Anaha, Arshas, Ksheeralasaka (lactose intolerance), Vatudushtastanya (breas milk vitiation due to vata dosha), Phenasanghastanya (milk with Froathy quality), Kashaya rasa (milk with excessive astringent taste)</td>
</tr>
<tr>
<td>Upadrava</td>
<td>Vaatavyadhi (diseases related to Vata)</td>
</tr>
</tbody>
</table>

2. Pancha Nidana

A. Nidana (causative factors) Thus based on the cardinal manifestation, major dosha involved and etiological factors, vibandha can be considered as a disease of Pakwashaya with predominance of Vatadosha. Hence the factors responsible for vitiation of vata and Agni are considered as the causative factors for the Vibandha. Etiological factors for vibandha are summarized in the table-2.

Table 2: Etiology of Vibandha.

| Rasa | Katu (acrid), Tikta (bitter), Kashaya (astringent) |
| Guna | Ruksha (dry), Guru (heavy), sheeta (cold), vidahi (causes burning sensation), Abhishyanda, sushka (dry) |
| Ashana | Abhojana (not taking food), Adhyaashana (eating food before the digestion of prior food), Vishamaashana (Abnormal and untimely eating habits), Asaatmyabhoojana (non-accustomed food), Viruddhaahara (incompatible food), Atyashana (excessive intake), Alpa bhoojana (less intake), Alpajalapana (less water intake) |
| Ahara | Patrashaka (leafy vegetables), Viruddha (sprouts), nava shokka (newly harvested cereals), Shushakashaka (dry leafy vegetables) Na bhrishtashaaka (unfried leafy vegetables), Guru phala (Fruits which are heavy to digest), Vega sandharana (withholding urges), Ratri jagarana (awakening at night) |
| Manas | Shoka (grief), Bhaya (fear) |

Poorva Rupa (Prodromal symptoms): Prodromal symptoms associated with Vibandha are Agnimandya (indigestion), aruchi (anorexia), bhaktadwesa (aversion towards feed), klama (fatigue), adhmana (tympanites), antrakoojana, arathi (dullness)
In infants other features could be rejection for feed, Routi (cries), Utthana avabhanajan (Excessive tossing), udarastabdhata (Reduced peristalsis), shaitya (Cold and clamy extremities), mukhasweda (Excessive perspiration on face).\[49\]

**Lakshana (symptoms):** By definition, cardinal manifestation of Vibandha is constipation and other features that concurrently co-exists are listed in the table 3.

**Table-3. Manifestation of Vibandha**

<table>
<thead>
<tr>
<th>Lakshana related to Mala</th>
<th>Anubandha Lakshana</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Vatavarcha Apravrutti (obstruction of flatus and faeces)^[26]^</td>
<td>1. Aruchi (Anorexia)</td>
</tr>
<tr>
<td>5. Kashta mala Pravarthana (difficulty while defecating)^[26]^</td>
<td>5. Shirasshoola^[53]^ (head ache)</td>
</tr>
<tr>
<td>6. Sa shool a mala Pravarthana (pain while defecating)^[51]^</td>
<td>6. Antrakoojana^[54]^ (Gurgling)</td>
</tr>
</tbody>
</table>

**Samprapthi:** As discussed earlier, Vibandha results from Agni dushti or Ama formation.^[55]^ or Vataprakopa.^[56]^ Events that occurs in samprapthi of Vibandha are summarised and in the flow chart.

**Table 4: Samprapthi.**

<table>
<thead>
<tr>
<th>Lakshana</th>
<th>Nidana</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agni Dushti</td>
<td>Vataprakopa + Agni dushti</td>
</tr>
<tr>
<td>Ama formation</td>
<td>anaha, atopa, Adhmana</td>
</tr>
<tr>
<td>Srotorodha</td>
<td>Apanavatavai gunya</td>
</tr>
<tr>
<td>Apanavatavai gunya</td>
<td>Ruksha, kharagunavriddi, in pakwashaya</td>
</tr>
<tr>
<td>Affects Mala Sanchaya</td>
<td>Mala sushkata</td>
</tr>
</tbody>
</table>

**Samprapthi ghatakas:** The elements of pathogenesis involved in Vibandha are thus explained in the table 5.
Table 5: Samprapthi ghatakas.

<table>
<thead>
<tr>
<th>Dosha</th>
<th>Vatadosha Pradhana pitta anubadha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dooshya</td>
<td>Mala</td>
</tr>
<tr>
<td>Dhatu</td>
<td>Rasa</td>
</tr>
<tr>
<td>Agni</td>
<td>Jatharagni</td>
</tr>
<tr>
<td>Ama</td>
<td>Sama</td>
</tr>
<tr>
<td>Srotas</td>
<td>Anna vaha, Preeeshavaha</td>
</tr>
<tr>
<td>Srotodushti</td>
<td>Sanga</td>
</tr>
<tr>
<td>Udbhavasthana</td>
<td>Amasahaya</td>
</tr>
<tr>
<td>Vyaktasthana</td>
<td>Pakwashaya, Sarvasarira</td>
</tr>
<tr>
<td>Sadyasadyata</td>
<td>Sukhasadhyata</td>
</tr>
</tbody>
</table>

3. Assessment of Vibandha: Vibandha is diagnosed by assessing the Koshta (bowel habits) of a person as well as the associated clinical manifestations. Vibandha is physiological in people with Vata and Kapha prakrti (constitutions) who by nature either pass hard stools or infrequent stools. This may be as a result of inherent dryness and excessive stagnation in their gut. Thus Vibandha can be termed as pathological, when it hampers routine digestive activity and manifests with earlier discussed clinical features.

4. Upadrava: Upadrava of vibandha can be stated as that of Those of Udavarta like Nishwasita (expires excessively) or faints, Trushyati (thirsty excessively) and Hikka, Parikarthika (anal fissure), Arshas (hemorrhoids).

5. Principles of Treatment: Based on the above discussion it can be concluded that Vibandha is a disease of Pakwashaya which is the Vatasthana and involvement of Agni is invariably seen in Vibandha. Hence the treatment principles consist of elimination of etiological factors, Udavarta.\(^{58,59}\) Pakwashayagatavata.\(^{60}\) have to be adapted.

Depending upon the severity one can adapt local Snehana (unction), Swedana (sudation), Matrabasti (therapeutic enema), Mruduvirechana (mild purgation).

Most important principle is that to include dietary modification, usage of Madhura (sweet), Lavana (salt), Amla (sour) rasa.\(^{63}\) timely intake of food and enough intake of water and fiber rich diet.

In case of intractable constipation, not amenable for routine treatment principles one can utilize the treatment principles of Arshas.\(^{61}\) and Grahani.\(^{62}\)
DISCUSSION AND CONCLUSION

Vibandha (constipation) in children is distressing and is a reason for increased parental concern. Physiologically Vata prakriti and Kapha prakriti are prone for hard bowels. This can be attributed to inherent dryness (due to Vata) and excessive stagnation (due to Kapha) in the koshta of persons with vata and kapha prakriti respectively. In infants vibandha can be as a result of faulty, infrequent feeding of the baby as well as improper dietary regimen of the mother leading to stanya dushti. Over enthusiastic toilet training in infancy sometimes may be distressing in children who later end up in habitual constipation. In toddlers and older children, Vibandha as disease usually occurs due to vata prakopaka ahara, vihara and non-compliance of Asthavidha aharayatana (dietary principles). This shall include changes in dietary habits, life style, social structure and constant mental stress that result in disturbances of Annavaha and Purishavahasrotovikaras (G.I. tract) like Vibandha, Adhmana, Anaha, Atopa etc., these symptoms persisting for longer duration end up in more distressing features vibandha. Chronic constipation can result in vicious cycle with frequent digestive disturbance, over stagnation of food, poor peristalsis, excessive retention of faeces (vibandha) and consequent nutritional problems in children.[64] Further, it can even have adverse impact on over all physical growth and mental compliance of children.

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