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# Appraisal of *Purisha Pariksha* (Fecal Examination) in the Diagnosis and Treatment of Diseases

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## ABSTRACT

Purisha pariksha (stool examination) is included under Ashtasthana Nirikshana. Mala are classified into two parts i.e. ahara mala and dhatu mala. Mutra and purisha are included under ahara mala while dhatu mala are further categorized into seven types. A specific method of stool examination, i.e., Jala majjana purisha pariksha and jala plawan purisha pariksha has been mentioned in Ayurveda to know the presence of ama, accordingly inferring the status of Agni in the body. The purisha vaha srotas may be affected due to holding up of the natural urge of defecation, over eating, eating during indigestion and when meal is not digested, especially in person with poor digestion and who are lean and thin.

Purisha (Stool) examination is helpful in diagnosis of disease, prognosis of disease, identifying stage of disease, dosha involvement in vitiation, state of digestive fire, presence of Ama (food toxin), arista lakshana (determine the remaining life span) and presence of krimi (parasites)

**Key Words** *Purisha, Pariksha, Ashtasthana, Nirikshana*

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## INTRODUCTION

Dosha-dhatu- mala plays an important role in normal body functions. Mala are excretory products of metabolic activities. Mala are categorized into two major parts i.e. ahara mala and dhatu mala. Mutra and purisha are classified as ahara mala while dhatu mala are further categorized into seven types<sup>1</sup>. After digestion ahara is divided into sara bhaga (nutrient portion), which is absorbed and utilized by tissues and the remaining undigested part becomes solid, is called as purisha. If mala are not excreted from the body, the metabolic process will be impaired and this will ultimately

lead to the malformed tissues and diseases.

Purisha pariksha (stool examination) is one of the diagnostic tools included under ashtasthana Nirikshan<sup>2</sup>. In Ayurvedic literature, examination of stool is limited mainly up to the physical characteristics such as quantity, color, odor, froth, and consistency. Besides these, a specialized technique of stool examination, i.e., Jala majjana purisha pariksha and jala plawan<sup>30</sup> has been mentioned in ayurveda to know the presence of ama, consequently inferring the status of Agni in the body<sup>3 & 4</sup>

**Laboratory determinations of feces examination<sup>30</sup>**

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Laboratory diagnosis of parasitic infection is mainly based on microscopic examination of the specimen.

Sometimes gross examination of the specimen may be helpful.

Depending on the nature of parasite the microscopic observations include identification of cysts, ova, trophozoites, larvae or portions of the adult structure.

Laboratory investigations

The various aspects studied for stool examination are as follows<sup>30</sup>:

### **Gross & physical examination by visual observation for following aspects**

- Consistency
- Colour
- Mucus
- Blood
- Parts of parasite
- Adult parasite

### **Chemical examination for following tests:**

- Reaction
- pH
- Occult blood

### **Microscopic examination to observe the following organisms, their parts, related eggs with other aspects:**

- Protozoans
- Nematelminthes
- Platyhelminthes
- Plant cells and fibers
- Meat fibers

- Crystals
- Fat globules
- Yeast cells
- Bacteria
- Erythrocytes
- Pus cells

### **Meaning of mala**

Before understanding the importance of mala, it is important to know correct meaning of the term 'mala'. The literal meaning of mala is dirt, filth, excrement, natural impurity. Acharya Sharngadhara defined mala as the waste products which definitely impure the body "malinikaranaat mala<sup>5</sup>" while Acharya Vagbhata has mentioned that mala is the entity which impure the body and are produced from ahara (ingested food) "malinikaranaadahara-malatvanmala<sup>6</sup>". But these meanings of mala expresses only one aspect, these mala have their biological significance too, besides impuring the body organs which is explored by its another definition "mrijyate shodhayate iti mala" meaning one which removes the dirt from the body<sup>7</sup>.

### **Features of normal purisha**

Features of normal purisha in terms of gandha (odor), sparsha (touch), varna (color), and vaishadya (unstickiness/clear) are not mentioned in the ancient and medieval period texts of Ayurveda, but stool examination has been given due importance in context of the diseases. Only pramana (quantity) of purisha has been described by acharya Charaka as sapta anjali pramana<sup>8</sup>.

### **Importance of mala :**

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During the process of formation of mala or purish, the remaining food material which attains pind-swaroop is known as purisha<sup>9</sup>.

Mala are physiologically as important as dosha and dhatu because dosha, dhatu and mala are considered as moola of body. Formation of dhatu in their respective quantities reflects the normal functioning of the three dosha- vata, pitta, kapha; and three types of agni viz. jatharagni, bhutagni and dhatvagni. Upastambha and vayu-agni dhara are the normal functions of purisha mentioned in Sushruta samhita<sup>10</sup>. Upstambhana means sub-supporter of the body. Purisha is the supporter of three dosha which in turn are the supporter of this body. Vayu-agni dharana maintains the equilibrium of vayu and agni in body. It is especially advised to hold purisha within body and not to be eliminated out in case of Rajayakshma<sup>11</sup> because when agni function is disturbed, ingested food is not metabolized properly and most of the nutrients are converted into mala form.

### Pathological variation in purisha

When feces decreases in amount, the pain may appear in cardiac region and lateral sides; vayu producing gurgling sound goes upward and moves around in the abdomen. When feces is not eliminated properly and increased excessively, feces cause flatulence, pain, distension and heaviness in abdomen<sup>12</sup>. The purisha vaha srotas may affected due to holding up of the natural urge of defecation, over eating, eating during indigestion and when meal is not digested, especially in person with poor digestion and who

are lean and thin. Due to srotodusti symptoms like passing of feces with difficulty, passing of feces in small quantity, with sound and pain, too liquid, too scabulous /hard and in large quantity<sup>13</sup> may appear. If one holds the urge for defecation other symptoms like colic pain, headache, retention of feces and flatus, cramps in calf muscles and distension of abdomen<sup>14</sup> may also appears.

### Mala: A Diagnostic tool

As mala is the reflection of functioning of dosha and agni, so mala can become one of the important diagnostic criteria of any ailment. Altered features of these mala signify abnormality in normal physiology. Variation in frequency, color, consistency, pain and burning sensation may help in making differential diagnosis too, for example, loose watery stool with increased frequency of defecation reveals diarrhea condition<sup>15</sup>; while hard stool, distended abdomen and decreased frequency reveals constipation<sup>16</sup>. Pale or yellow colored stool indicated kamala roga (jaundice)<sup>17</sup>. Prameha (diabetes mellitus) is represented by turbidity and increased frequency<sup>18</sup>; however mutra-kshaya, is represented by decreased or obstructed micturition with pain and burning sensation<sup>19</sup>. Micturition of dark yellow or reddish colored urine without presence of prodromal symptoms (purvarupa) of premeha indicates the presence of raktapitta<sup>20</sup>. Altered sweating is an important feature of kushtha<sup>21</sup> (skin disorder) and vatarakta (gouty arthritis). Variation from normal color of urine and stool along with skin, nails, eyes help

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in identification of type of doshic involvement, like aruna varna (dawn colour) in vata dosha, yellowish or greenish in pitta dosha and white color in kapha dosha involvement<sup>22</sup>. Understanding the significance of mala as diagnostic tool, Acharya Yogaratnakara included mutra pariksha and mala/ purisha pariksha in ashtasthana pariksha (eight fold examinations)<sup>23</sup>. Characters of dhatu mala reveal normal working of dhatvagni. It indicates that if jathragni is not properly working, aam-dosha may be formed that may leads to formation of denatured dhatu and further abnormal dhatvagni which results in morbid mala. The saam and niraam pariksha of mala also reveals the functional status of jatharagni.

Mala, which is described as diagnostic tool by ancient scholars, is also supported by modern system of medicine. By analysis of protein, creatinine, phosphate ions etc, and culture and sensitivity test of urine diseases like urinary tract infection, renal failure, liver disorders, diabetes etc may be diagnosed. Urine test is also used to diagnose presence of pregnancy. Like urine examination, stool examination is done for the detection of infection of digestive tract, typhoid, worm infestations, poor nutrient absorption or cancer etc. make out the significance of mala in our body. Ayurveda scholars have also mentioned the treatment of various pathological condition of mala, like pureesh-varadhaka dravya such as kulmasha, masha, aja-madhya, yava, shaka etc are used in case of purisha kshaya; treatment of mutra, pureesh and sveda vaha

srotodushti is similar to treatment of mutra-kriccha, aatisara and jwara, respectively; pureeshsangrahaniya, pureesh-virajaniya, mutra-sangrahaniya, mutra-virajaniya, mutra-virechaniya, svedopaga maha-kashaya are used for different diseases. Treatment of diseases caused by holding natural urges has been described also in ayurveda<sup>24</sup>.

### Significance of puisha (stool) examination

Purisha (Stool) examination is helpful in-

1. Diagnosis of disease
2. Prognosis of disease
3. Identifying stage of disease
4. Dosha involvement in vitiation
5. State of digestive fire
6. Presence of Ama (food toxin)
7. Arista lakshana (determine the remaining life span)
8. Presence of krimi (parasites)<sup>25 &30</sup>

### Importance of stool examination in babies-

Newborn's diaper may have greenish-black, tarry, sticky stool that looks like motor oil. Since meconium is made of amniotic fluid, mucus, skin cells, and other substances ingested in utero, there is no smell. After 2 to 4 days, stool becomes lighter in color (sort of an army green) and less sticky. This is called transitional stool which is a sign that breast or formula milk digestion started and intestinal tract is okay<sup>26</sup>.

### Healthy breastfed and formula fed stool

If baby is exclusively breastfed, stool will be yellow or slightly green and have a mushy or creamy consistency that suggests the healthy integrity of baby's intestine. Breastfed stool typically looks like mustard and cheese mixed together and may be dotted with little seed-like flecks and smell isn't so bad. There are many

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shades of normal stool in breastfed baby. If baby doesn't experience any other symptoms, there's no need to give medications. Bright green and frothy stool might be due to, too much foremilk (the low calorie milk that comes first in a feeding) and not enough hind milk (the higher fat and super nutritious). It means that mother is not feeding her baby, long enough on each breast.

Formula-fed babies have pasty, peanut butter-like stool on the brown color spectrum: tan brown, yellow-brown, or green-brown. It's more pungent than stool from breastfed babies and a little less pungent than stool from babies who are eating solid food

### **Iron-fortified stool**

If baby is taking an iron supplement, his stool may turn dark green or almost black. This doesn't happen often, but it's a completely normal variation. But, if baby is not taking an iron supplement and still stool looks blackish, then it could be melena.

### **Stool with solid-food and partially digested food:**

Once baby start solid foods (rice cereal, pureed bananas etc), a change in their stool can be observed, especially if baby is breastfed, solid-food stool tends to be brown or dark brown and thicker than peanut butter, but still mushy and there may be a smell.

Stool will have recognizable chunks of food in it or be tinged with a shade of the rainbow, like red, orange or dark blue. Red could mean beets, orange suggests carrots, and dark blue implies grapes. If stool dropped in water, it will sink to

the bottom. This is identified as sama mala<sup>28</sup>. It appears because some foods are only partially digestible or travel so quickly through the intestines that they don't break down completely. It may also happen when baby eats a lot of one type of food or doesn't chew completely before swallowing the food. This all condition may leads to various types of disease in adult, but this could be normal in pediatric age group. If baby's stool consistently has undigested food, it may be matter of concern.

### **Diarrhea**

Diarrhea is a loose, watery and more frequent bowel movement. Diarrhea can be a sign of an infection or allergy, it may leads to dehydration. The stages of dehydration can change very rapidly in babies. if baby is 3 months old or younger, has more than two or three diarrhea-filled diapers<sup>29</sup>, or continues having diarrhea for more than a day or two then it must be taken seriously. It is matter of concern if baby's diarrhea contains visible blood or mucus.

### **Constipation**

In constipation, baby's stool will be hard and looks like little pebbles. Baby may be uncomfortable when defecating and the stool may even be tinged with blood. One or two diapers isn't a matter of worry, but if baby has three or more (or if bloody) diapers, it's best to attend the problem immediately. Constipation frequently happens in babies who are being introduced to solid foods. Constipation may also be a sign of milk or soy protein sensitivity or a lack of tolerance to something in breast milk or

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formula<sup>29</sup>. It can be taken as aggravated stool as per Ayurveda

Summary of Purisha pariksha versus stool examination in various abnormal conditions<sup>30</sup>

**Table 1** Summary of Purisha pariksha versus stool examination in various abnormal conditions

S No	Purisha	Stool
1.	Quantity Purisha (faeces) - Seven Anjali	Normally there is 100 to 200 G/day. With a vegetable diet, may be 250 g/day.
2.	Colour	Haridra Harita Nila Krishna – patient passes frequent stool which is yellow, green, blue or black in color.  Rakta Pitta Upahita- patient passes stool mixed with pitta(Bile) and Rakta(blood)
3.	Consistency	<b>Vata dusti-</b> Phenila(frothy, Parusha (lack of stickiness or having Rukshata), Tanu(transparent), shighra (spreading fast), Vishada (nonslimy), Askandi (deranged coagulation) <b>Kapha dusti-</b> Tantummat (thready) and Ghana (thick), picchila(slimy)
4.	Quantity	<b>Kapha dusti-</b> Bahala(Excess quantity)
5.	Odour	<b>Pitta dusti-</b> Visram(bad odour) Tridosha dusti-durgandi(emits a fetid smell).
6.	Other	<b>Pitta dusti-</b> anistapipilika maksika(disliked by flies and ants); Askandi (deranged coagulation)/ Ausnyat Chirena Styayati (longer time to coagulate) <b>Kapha dusti-</b> Chirasravi(prolonged bleeding), snigdha(unctous), sheetal(cold),

## CONCLUSION

Regarding Purisha pariksha there are scattered references available in the texts. Charaka has described qualities of Purisha and Purishagata in different diseases. Physical changes of purisha with reference to vitiated dosha like Jvara, Gulma, Arsha, Pandu etc. mentioned. Sharangdhara and Madhavakara have not described stool examination separately but Yogratnakara has described under Astasthan Nirikshana in 7<sup>th</sup> century.

Jala-majjan and jala plavana Purisha Pariksha has been described in number of Ayurvedic texts of ancient and medieval period like Charaka Samhita, Sushruta Samhita, Ashtanga Samgraha, Ashtanga Hridayam, Yogaratnakara and many

more. Abnormalities in respect of odour, colour, quantity etc. of stool examination can be used as important diagnostic tool. Chakshusendriya Pariksha, one can assess colour, consistency, presence of froth, abnormal constituents etc. The pitta dosha according to Ayurveda is responsible for the production of all colours. Tridoshas also play an important role in affecting the colour of stool as well as other parts of body. Vitiating of Doshas causes changes in different colour.

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