



Assessment of Purisha at Laboratory Level- A Review

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Article History	Abstract
Received: 02 June 2023 Revised: 28 Sept 2023 Accepted: 13 Nov 2023	Ahara is panchabhautika, each element of ahara is not used by the body, thus it is eliminated in the form of waste (Mala). The importance of by products, produced during the digestion process, is as important as food consumption in terms of nutrition for every body segment and these phenomena are unavoidable. The proper formation of these malas is a reflection of the normal metabolic function and regular dhatu production, with good characteristics. Mala have the same physiological value as dosha or dhatu, since they are considered to be body moola. The metabolism will be affected if malas are not removed from the body, eventually leading to a malformation of tissues and diseases
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Introduction

Dosha-dhatu- mala plays 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. 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 tool included under ashtasthana pariksha. 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 nimajjana purisha pariksha and jala plawan has been mentioned in ayurveda to know the presence of ama, consequently inferring the status of Agni in the body.

Connation 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 "malinikarnaat mala" while acharya Vagbhata has mentioned that mala is the entity which impure the body and are produced from ahara (ingested food) "malinikaranaadahara-malatvanmala". 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 "mriyate shodhayate iti mala" meaning one which removes the dirt from the body.

Characteristics of 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.

Formation of purisha

Digestion of food takes place with the help of jathragni and bhutagni, the digested food is divided into sara bhag and kitta bhag. Kitta bhaga having two parts i.e drava bhaga and ghana bhaga, drava bhag is called as mutra and ghana bhaga is called as purisha or shakrut. According to Charaka : the part of the food which enters into the pakwasahya will become dry due to the presence of agni and attain pindaswarupa. In the course of this process due to katu rasa the vriddi of vayu takes place. During the process of formation of mala or purish, the remaining food material which attain pind-swaroop is known as purisha.

Significance of mala:

However ahara is panchabhautika, each element of ahara is not utilized by body, therefore is eliminated in form of wastes. By-products, which is produced during process of digestion is also as important as consumption of food for nourishment of each body segment and is an unavoidable phenomenon. Proper formation of these mala reflects the normal metabolic function and normal production of of dhatu, having good qualities. 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. 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 Rajyakshma because when agni function is disturbed, ingested food is not metabolized properly and most of the nutrients are converted into mala form.

Pathological variants of purisha

When feces decreases in amount, the pain may appears 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 . 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 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 may also appears.

Role of Mala in Diagnosis

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; while hard stool, distended abdomen and decreased frequency reveals constipation. Pale or yellow colored stool indicated kamala roga (jaundice). Prameha (diabetes) is represented by turbidity and increased frequency; however mutra-kshaya, is represented by decreased or obstructed micturition with pain and burning sensation. Micturition of dark yellow or reddish colored urine without presence of prodromal symptoms (purvarupa) of premeha indicates the presence of raktapitta. Altered sweating is an important feature of kushtha (skin disorder) and vatarakta (gouty arthritis). Variation from normal color of urine and stool along with skin, nails, eyes help 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. Understanding the significance of mala as diagnostic tool, acharya Yogaratnakara included mutra pariksha and mala/ purisha pariksha in ashtavidha pariksha (eight fold examinations). Characters of dhatu malareveals 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. 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 diseases caused by holding natural urges have been described also in ayurveda.

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
5. Presence of Ama (food toxin)
6. Arista lakshana (determine the remaining life span)
7. Presence of krimi (parasites)

Role of stool examination in Newborn

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.

Attributes of stool in Breastfed and Formula fed

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 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 hindmilk (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: tanbrown, 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

Attributes of stool in Iron fortified diet

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.

Attributes of stool in semisolid/solid fed kids

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 . 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 concern²⁶.

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, 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 formula. It can be taken as aggravated stool as per Ayurveda.

Consequences of Stool with mucus or blood with mucus or blood

Greenish stool streaked with shiny, glistening strings reveals there is mucus in stool; it may be sign of an infection or allergy. If it's accompanied by any other symptoms or shows up in baby's diaper for two days or more, it is time to rule out the problems.

Sometimes blood may be present in a baby's stool and color of stool may be bright red or black. Bright red blood can show up in baby's stool due to different reasons. Normal stool tinged with red blood is often a sign of a milk protein allergy. Constipated stool with red blood is a consequence of tears in the anus or tiny hemorrhoids. Diarrhea mixed with red blood indicates bacterial infection. When black blood appears in a baby's diaper usually in little flecks and appears like black sesame seeds, it indicates the baby is breastfed and swallowing blood from mother's cracked and bleeding nipples, it doesn't pose a threat to baby²⁶.

Conclusion

Mala are also as physiologically important as dosha or dhatu, since mala is considered to be a moola of the body. Because mala is a reflection of Dosha and Agni's functions, this can be one of the basic diagnostic criteria for any disease. The altered features of these malas manifest abnormalities in the normal functioning of the body. It may also be useful to determine differential diagnosis based on differences in frequency, colour, consistency, pain and burning sensation.

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