

# Critical evaluation of ayurvedic sparsha pariksha (palpation) in diagnosis of diseases wsr to gastrointestinal system palpation

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## ABSTRACT

Ancient Ayurvedic acharyas have described many clinical methods to diagnose the disease. Sparsha Pariksha (Palpation) is one of them. Different Ayurvedic acharyas like Charaka, Sushruta, Bhela have mentioned different parameters to be examined by palpation such as Softness hardness, coldness, warmth, rigidity, pulsations, tactile perceptions in disease states like fever, tumour, edema, abscess, organomegaly, skin lesion etc. As per acharya Chakrapani Dasa, the flexion and extension difficulty of extremities and softness and hardness of palate, tongue etc should be examined with palpation. In book called 'Yogaratanakara', the general tactile feeling doshik diseases is mentioned. Acharya Vinodlal Sen had described the methodology of hepatosplenic palpation in his book 'Ayurved Vigyan'. Modern science had described the palpation of Gall bladder and Kidneys apart from liver and spleen. There are many pathological conditions which can be diagnosed on the basis of tactile perception of the lesion. In general, tenderness or guarding during organ palpation, indicates underlying inflammatory painful condition. For e.g. infective hepatitis may give rise to tender

hepatomegaly. The stony hard touch of lump indicates malignant growth as observed in disease Arbuda (Malignant tumour) and Kaphaj/Sannipatik Gulma (malignant abdominal tumour). The movement of lump on palpation also gives idea about the nature of, the disease. The malignant tumours are usually fixed and stable. The palpation may give idea about the state of temperature either local (inflammatory edema) or general (fever). The palpation also gives idea about the size and shape of the lesion. It also gives idea about regularity or irregularity of the lesions. Generally malignant tumours are irregular in shape as like hepatocellular carcinoma (Yakritodara). To indicate the irregularity of the lesion, Ayurveda used adjectives like back of the tortoise (Kacchap Prishthawat). The dryness and smoothness of the skin lesions can also be felt with palpation. The palpation examination can also give some idea about emergency conditions such as intestinal obstruction in which abdominal rigidity is observed. On the basis of guidelines given by Acharyas in [S.Su.10/5] and [C.Vi. 4/7]; the palpation criteria for the gastrointestinal system can be framed

It is observed and concluded that palpation as tool of examining the patient is very well described in Ayurveda. Preliminary clinical diagnosis of some of the diseases, particularly gastrointestinal can be made using palpation as method of examination.

**Key Words:** Sparsha; Ruksha; Khava; Mrudu; Ushna; sheeta; Palpation; Liver, spleen

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## INTRODUCTION

Ancient Ayurvedic acharyas have described many clinical methods to diagnose the disease. Sparsha Pariksha (Palpation) is one of them. Different acharyas mentioned different parameters to be examined by palpation. As per Acharya Charaka, Softness hardness, coldness, warmth, etc should be assessed by palpation. As per Acharya Sushruta, Cold, Hot, Smooth, Rough, Soft, Hard, etc. tactile perceptions in fever, edema, etc. should be assessed through palpation. As per Acharya Bhela, the normalcy or abnormality of the temperature of the body, softness, roughness, warmth, and coolness should be examined by hands. As per acharya Arundutta, temperature, tumour, abscess swelling, and coldness, hotness,

rigidity, pulsations, soft or rough surface, etc. in diseases like fever, tumour, the abscess should be examined with palpation. As per Acharya Chakrapani Dasa, the flexion and extension difficulty of extremities and softness and hardness of palate, tongue, etc should be examined with palpation. In a book called 'Yogaratanakara', the general tactile feeling doshik diseases are mentioned. Besides this, acharyas have described the characteristic tactile finding in various diseases such as Jwara (Fever), Kushtha (Skin lesions), Yakritodara (Hepatocellular Carcinoma), Shleepada (Elephantitis), Sannipataj Gulma (Malignant Growth), Shotha (Edema), etc. Acharya Vinodlal Sen described the methodology of hepatosplenic palpation in his

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book 'Ayurved Vigyan'. Modern science had described the palpation of the Gall bladder and Kidneys apart from the liver and spleen.

### REVIEW OF LITERATURE

#### Palpation examination as per Acharya Charaka

- Touch in healthy and diseased states should be assessed through palpation [1].
- Softness (mardava), hardness (mardav viparyaya), coldness (shaitya), warmth (shaitya viparyaya) etc should be assessed by palpation.
- In Pittaj disease, the touch is warm whereas Vataj disease has cold touch. In Kaphaj diseases, touch is moist.
- The physician who is keen to know the remaining life span of the patient by way of palpation then he should palpate the entire body of the patient. While doing so, he should record the following things [2]:
  - i. Whether there is a loss of pulsation in the body areas which are constantly pulsating?
  - ii. Whether the body parts which are usually warm are getting cold?
  - iii. Whether the body parts which are usually smooth are feeling rough?
  - iv. Whether there is the feeling of loss of sensation on palpation?
  - v. Whether the joints are felt loosened or dislocated on palpation?
  - vi. Whether there is a loss of skeletal mass on palpation?
  - vii. Whether there is profuse sweating?
  - viii. Whether there is generalized stiffness?Any other palpable sign appearing without any reason?

#### Palpation examination as per Acharya Sushruta

- Cold, Hot, Smooth, Rough, Soft, Hard, etc. tactile perceptions in fever, edema, etc. should be assessed through palpation (Table 1).

#### Palpation examination as per Acharya Bhela

- The normalcy or abnormality of the temperature of the body, softness, roughness, warmth, and coolness should be examined by hand.

#### Palpation examination as per Acharya Arundutta

- As per Acharya Arundutta by touching the palmer surface of the hand, one should feel the temperature,

tumour, abscess swelling and also the coldness, hotness, rigidity, pulsations, soft or rough surface, etc. in diseases like fever, tumour, abscess.

- As per Acharya Hemadri, coldness of extremities, etc should be examined by touch and palpation.

#### Palpation examination as per Acharya Indukara

- As per Acharya Indukara, by palpation, the physician should examine the temperature, hardness, swelling, etc.
- As per Acharya Chakrapani Das, the following aspects to be examined with Palpation.
- As per Acharya Chakrapani Das, the following points should be assessed by palpation examination.
  - i. Gatra Sankoch Nirodha- Flexion difficulty.
  - ii. Gatra Prasaran Nirodha- Extension difficulty.
  - iii. Kanta Talu Sheeta Ushna Bhava- Warm or coldness of throat and palate.
  - iv. Aushtha Jivha Sheeta Ushna Bhava- Warm or coldness of lips and tongue.
  - v. Kanta Talu Mrudu Darun Bhava-Soft or hardness of throat and palate.
  - vi. Aushtha Jivha Mrudu Darun Bhava - Softness or hardness of lips and tongue.

In nutshell as per Ayurveda following points should be examined through the palpation examination (Table 2).

#### 1. Hot/warm touch (ushna sparsha)

- The body felt hot in fever.
  - i) The warm body is also noticed in hyperthyroidism, hypertension, anger, diabetic ketoacidosis, and increased mental stress.
- The callor and dallor in inflammatory swelling.
  - i) Kanta Talu Ushna Bhava- Warmness of throat and palate.
  - ii) Aushtha Jivha Ushna Bhava- Warmness of lips and tongue.

#### 2. Cold touch (sheeta sparsha)

- Cold skin and extremities in peripheral circulatory failure (hypotension) and cardiac arrest. It is also noticed in hypoglycemia, anemia, depression, and shock.  
Kanta Talu Sheeta Bhava - the coldness of throat and palate.  
Aushtha Jivha Sheeta Bhava- the coldness of lips and tongue.

### 3. Hard touch (kathin sparsha)

- In hepatoma, the liver is felt hard, knobby, and irregular like the back of a tortoise on palpation.
- The Kaphaj edema is heavy, fixed, nonpitting/hard (Nipidito Na Unnamet) [3].  
The Kaphaj type of swelling is hard, fixed, pits on pressure, and is more in the night. It is associated with anemia and anorexia. The non-suppurated Gulma (tumour) is heavy, hard, deep-rooted, fixed, and without discoloration.
- Edema of elephantitis (Shleepada) is also hard.
- Generally all malignant growths are felt hard.  
Kanta Talu Darun Bhava -hardness of throat and palate.  
Aushtha Jivha Darun Bhava - hardness of lips and tongue.

### 4. Soft touch (mridu sparsha)

- Soft abdominal enlargement is noticed in obesity, ascitis.
- Soft and pitting edema is noticed in hypoproteinemia.
- Soft and tender hepatomegaly is noticed in acute hepatitis.
- Kanta Talu Mrudu Bhava – Softness of throat and palate
- Aushtha Jivha Mrudu Bhava - Softness of lips and tongue

### 5. Rough touch (karkash /khara sparsha)

- The 'Kapal' kushtha is brownish-blackish, rough in touch, and painful.
- The 'Rushyajivha' kushtha is blackish in centre and reddish in the periphery and thorny in touch.
- The 'Kitibha' kushtha is blackish and rough in touch [4].
- Rough skin is also noticed in eczema and psoriasis.
- Rough and scaly skin is noticed in anemia.

### 6. Smooth touch (shlashna sparsha)

- Soft swelling of medoj galaganda.
- Soft cystic swelling.

- Hypothyroidism.

### 7. Flexion and extension difficulty (gatra aankunchan prasaran nirodh)

Difficulty in flexion and extension should be examined with hands. In osteoarthritis, there is difficulty in extension and flexion. Muscle tone is assessed by putting selected muscle groups through a passive range of motion. The most commonly used method for the upper extremities are flexion and extension at the elbow and wrist.

- Clasp knife spasticity is velocity dependent and should be assessed by quick flexion and extension of the knee or elbow or quick supination and pronation of the arm.
- Lead pipe rigidity is continuous and not velocity dependent and the movement should be performed slowly.
- Cogwheel rigidity is continuous, ratchety, and typically seen at the wrists.
- Rigidity in the neck can be assessed by slow flexion, extension, and rotation movements.

### 8. Other touch (anya sparsha)

#### Pitting edema

This type of edema pits on pressing and fills slowly. It is noticed in edema due to cardiac failure, renal failure and hepatic failure and hypoproteinemia.

#### Non pitting edema

This type of edema does not pit (produce cavity) on pressing. It is noticed in elephantitis and myxoedema.

#### Hyperaesthesia

In this condition patient cannot tolerate the touch of hand or clothes. It is noticed in peripheral neuritis, diabetic neuropathy, alcoholic neuropathy etc.

### Palpation of gastrointestinal system

- The curious examiner should palpate the abdomen and its contents separately to know the remained life span of the patient as well as to check their position whether loosened (Stransan), dislocated (Vyasta) or prolapsed (Chyuti).
- The organs palpable in the abdomen are Liver (Yakrit), Spleen (Pleeha), Kidneys (Vrukka), and Gall Bladder (Tilwak) if increased in size. Their softness (Mrudutwa), hardness (Kathinta),

Smoothness (Shlashnatwa), roughness (Karkashta) etc can be assessed through palpation. Since the organs in the abdominal cavity are not enclosed in a bony cage all along; gives us chance to palpate partially.

- On the basis of guidelines given by Acharyas in [S.Su.10/5] and [C.Vi. 4/7]; the palpation criteria for the gastrointestinal system can be framed as follows:
  - i. Palpation of the liver.
  - ii. Palpation of the spleen.
  - iii. Palpation of the gall bladder.
  - iv. Palpation of Abdominal Tumour.
  - v. Palpation of the kidney (It will be discussed in the Urinary system).

#### Palpation of the liver

- Liver is located on the right side below the heart in the rib cage. Normally it is not palpated but when enlarged; could be felt along the right costal margin [5].
- The examiner moves his hand from the right iliac fossa upwards along the costal margin until a sense of resistance is felt. The liver edge is felt accurately by the fingertips. It is normally sharp, firm, and regular. The surface of the liver is also palpated. Normally it is smooth.
- Large nodular knobby surface indicates hepatic malignancy whereas a fine irregular nodular surface suggests cirrhosis of the liver.
- There is knobby hard and irregular hepatomegaly in 'Yakritodara' (Kathin Ashthilawat Kachhap Sansthana) which is nothing but Hepatocellular Carcinoma [6].
- Tender hepatomegaly in Pittaj Yakrit Vruddhi and Haridrak Jwara indicates viral hepatitis.
- There is abdominal tenderness in Pittaj Gulma.
- Kaphaj Gulma (Kaphaj abdominal lump) is hard, heavy, and deep-seated.
- Sannipatah Gulma is stony hard [7].
- Soft and tender hepatomegaly in Pittodara.
- Touch like a bag full of water (fluid thrills) in ascites.

#### Palpation of the spleen

- Spleen is located on the left side below the heart

in the rib cage. Normally it is not palpated but when enlarged; could be felt along the left costal margin.

- The spleen should be palpated with a hand for any enlargement. If the spleen is felt on palpation then it could be due to anemia (Raktakshaya).
- It could be hard and prominent in Shleshmik affliction.
- Spleen is hard, knobby, and irregular like the back of a tortoise in malignant infiltration.
- The biggest spleen is observed in purvadeshaj Jwara (Kala-azar) [8].

#### Palpation of abdominal tumour

- The suppurated abdominal tumour is evenly elevated (Sama Unnat), blackish with reddish boundary (Shyav Sarakta Paryantam), on palpation, it feels like a full bladder (Sansparshe Basti sannibhe), feels round in shape (Stabdhe), on pressing deep, it bounces up (Nipidito Unnate), on pressing there is little tenderness (Supte Parshwapidanat).

#### Methods of palpation of Spleen

- i. Classical – The patient is palpated from the right iliac fossa upwards to the left hypochondriac region. The edge of the spleen may be felt on deep inspiration.
- ii. Bimanual – The patient is put in the right lateral position. One hand of the examiner is put over the lower chest and the spleen is palpated with the other hand. A soft spleen which may be missed by the classical method may be palpated by this method.
- iii. Dipping – This is done in the ascitic patient. In this method, the patient is palpated classically. The only difference is that the examiner dips his finger to displace the fluid to facilitate the splenic palpation. Tactile feeling is like palpating a leather bag full of water in it. (Udakpurna Druti Sparsha)

#### Splenomegaly & diagnosis

- The massive splenomegaly-malaria, kala-azar, and myeloid leukemia.
- Moderate splenomegaly- hemolytic anemias, Hodgekin's disease, hemochromatosis, malaria, kala-azar and myeloid leukemia.

- Mild splenomegaly- typhoid, septicemia, and subacute bacterial endocarditis.
- The splenomegaly with lymphadenopathy- leukemia, Hodgekin's and Non Hodgekin's lymphoma, and tuberculosis.
- The splenomegaly with petechiae- leukemia, subacute bacterial endocarditis, systemic lupus erythomatosus.
- The splenomegaly with pallor and icterus- hemolytic anemias and cirrhosis of liver.

#### Palpation of the gallbladder

- Normally the G.B. is not palpable as its upper border lies beneath the costal cartilage. It is palpated like the liver. When distended it is felt as smooth rounded globular swelling with distinct borders just lateral to the rectus abdominus muscles.
- It can be caught when the patient breaths deep in case of cholecystitis (Murphy's Sign).
- A tender, palpable Gall Bladder indicates Cholecystitis whereas non-tender palpable large GB may indicate malignancy [9, 10].

#### Palpation of the kidneys

- Normally the kidneys are not palpable unless enlarged and placed low in position. The left kidney is palpated by keeping the left hand posteriorly in the left loin and the right hand in the left lumbar region. The patient is asked to take deep breaths and the left hand is pressed forwards and the right hand backward, upward, and inwards. The right kidney is palpated similarly on the right side (Table 3).
- Pasternacki's Sign-As the kidney lies directly below the costovertebral angle, tapping over this region irritates the inflamed tissue, causing pain. The patient is asked to sit upright then the examiner put this left hand on a costovertebral angle and with a fist of right-hand strikes over it. Patients with pyelonephritis and renal stone will experience pain with this method.

## OBSERVATIONS & RESULTS

**TABLE 1**  
**Quality of sparsha (touch ) as per doshik variations**

Vataj Diseases	Pittaj Diseases	Kaphaj Diseases
Cool	Warm	Moist

**TABLE 2**  
**Characterstic of various pathological sparshas as per ayurveda**

Sr.	Sparsha (Tactile Feeling)	Examples of Pathological Condition
1	Hot/Warm Touch (Ushna Sparsha)	Jwara (Fever), Shotha (Edema)
2	Cold Touch (Sheeta Sparsha)	Pandu (Anemia), Maransanna Awastha (Shock)
3	Hard Touch (Kathin Sparsha)	Kaphaj Shotha (Kaphaj Edema), Kaphaj Gulma (Tumour), Shleepada (Elephantitis)
4	Soft Touch (Mridu Sparsha)	Jalodara (Ascites), Sthaulya (Obesity)
5	Rough Touch (Karkash /Khara Sparsha)	'Kitibh' kushtha (Psoriasis) Pandu (Anemia),
6	Smooth Touch (Shlashna Sparsha)	Medoj galaganda (Fatty Goitre)
7	Irregular (Visham)	Yakritodara (Hepatocellular Carcinoma)

**TABLE 3**  
**Organomegaly Characteristics**

Criteria	Hepatomegaly	Splenomegaly
Soft & Tender	Hepatitis	Splenic infections
Hard & Uneven	Hepatocellular Carcinoma	Splenic Malignancy
Mild	Typhoid, Septicemia, SBE	Typhoid, Septicemia, SBE
Moderate	Hodgekin's disease, Hemolytic anemias	Hodgekin's disease, Hemolytic anemias
Severe	Malaria, Kala azar, Myeloid Lukemia	Malaria, Kala-azar, Myeloid Lukemia

## DISCUSSION

Ancient Ayurvedic acharyas have described many clinical methods to diagnose the disease. Sparsha Pariksha (Palpation) is one of them. Different acharyas mentioned different parameters to be examined by palpation. As per Acharya Charaka, Softness hardness, coldness, warmth, etc should be assessed by palpation. As per Acharya Sushruta, Cold, Hot, Smooth, Rough, Soft, and Hard etc. tactile perceptions in fever, edema etc. should be assessed through palpation. As per Acharya Bhela, the normalcy or abnormality of the temperature of the body, softness, roughness, warmth, and coolness should be examined by hands. As per acharya Arundutta, temperature, tumour, abscess swelling, and also the coldness, hotness, rigidity, pulsations, soft or rough surface, etc. in diseases like fever, tumour, the abscess should be examined with palpation. In a book called 'Yogaratanakara', the general tactile feeling doshik diseases are mentioned. Many pathological conditions can be diagnosed based on the tactile perception of the lesion. In general, tenderness or guarding during organ palpation indicates an underlying inflammatory painful condition. For eg. infective hepatitis may give rise to tender hepatomegaly. The stony hard touch of the lump indicates malignant growth as observed in disease Arbuda (Malignant tumour) and Kaphaj/Sannipatik Gulma (malignant abdominal tumour). The movement of lump on palpation also gives an idea about the nature of the disease. The malignant tumours are usually fixed and stable. The palpation may give an idea about the state of temperature either local (inflammatory edema) or general (fever). The palpation also gives an idea about the size and shape of the lesion. It also gives an idea about the regularity or irregularity of the lesions. Generally, malignant tumours are irregular in shape like hepatocellular carcinoma (Yakritodara). To indicate the irregularity of the lesion, Ayurveda used adjectives like back of the tortoise (Kacchap Prishthawat). The dryness and smoothness of the skin lesions can also be felt with palpation. Palpation may give an idea about pulsatile masses. The pulsating abdominal artery in the epigastric region may be felt in a thin individual. The palpation examination can also give some idea about emergency conditions such as intestinal obstruction in which abdominal rigidity is observed.

As per Acharya Chakrapani Dasa, the flexion and extension difficulty of extremities and softness and hardness of palate, tongue, etc should be examined with palpation. As per modern science, muscle tone is assessed by putting selected muscle groups through a passive range of motion. The most commonly used method for the upper extremities is flexion and extension at the elbow and wrist.

Clasp knife spasticity is velocity dependent and should be assessed by quick flexion and extension of the knee or elbow or quick supination and pronation of the arm. Lead pipe rigidity is continuous and not velocity dependent and the movement should be performed slowly. Cogwheel rigidity is continuous, ratchety, and typically seen at the wrists. Rigidity in the neck can be assessed by slow flexion, extension, and rotation movement.

## SUMMARY & CONCLUSION

- i. The concept of palpation examination is very well documented in ancient Indian medical science.
- ii. The palpation examination is helpful in making the clinical diagnosis of some of the disease.

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