



Critical Evaluation of Ayurvedic Sparsha Pariksha (Palpation) in Diagnosis of Diseases WSR to Respiratory 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 and 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 examine with palpation. In book called 'Yogaratnakara', the general tactile feeling doshik disease is mentioned. Acharya Vinodlal Sen had described the methodology of hepatosplenic palpation in his book 'Ayurveda 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.

Keywords: Sparsha, Ruksha, Khara, Mrudu, Ushna, Sheeta

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, warmness 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 temperature of the body, softness, roughness, warm 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 disease like fever, tumour and 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 examine with palpation. In book called 'Yogaratanakara' the general tactile feeling doshik diseases are mentioned. Beside 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 had described the methodology of hepatosplenic palpation in his book 'ayurveda vigyan.' Modern science had described the palpation of gall bladder and kidneys apart from liver and spleen.

LITERATURE REVIEW

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), warmness (shaitya viparyaya) etc should be assessed by palpation [2].
- In Pittaj disease, the touch is warm whereas Vataj diseased have cold touch. In Kaphaj diseases, touch is moist [3].
- 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 [4].
- Whether there is loss of pulsation in the body areas which are constantly pulsating?
- Whether the body parts which are usually warm are getting cold?
- Whether the body parts which are usually smooth are feeling rough?
- Whether there is feeling of loss of sensation on palpation?
- Whether the joints are felt loosened or dislocated on palpation?
- Whether there is loss of skeletal mass on palpation?
- Whether there is profuse sweating?
- 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 [5].

Palpation examination as per acharya bhela: The normalcy or abnormality of temperature of the body, softness, roughness, warm and coolness should be examined by hands [6].

Palpation examination as per acharya arundutta:

- As per acharya arundutta by touching with 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 disease like fever, tumour, abscess [7].
- As per acharya hemadri, coldness of extremities etc should be examined by touch and palpation [8].

Palpation examination as per acharya indukara: As per acharya indukara, by palpation, the physician should examine the temperature, hardness, swelling etc. [9].

As per acharya chakrapani das, following aspects to be examined with palpation: [10].

As per acharya chakrapani das, following points should be assessed by palpation examination.

- Gatra sankoch nirodha-flexion difficulty.
- Gatra prasaran nirodha-extension difficulty.
- Kanta talu sheeta ushna bhava-warm or coldness of throat and palate.

- Aushtha jivha sheeta ushna bhava-warm or coldness of lips and tongue.
- Kanta talu mrudu darun bhava-soft or hardness of throat and palate.
- Aushtha jivha mrudu darun bhava-soft or hardness of lips and tongue.

In nutshell as per Ayurveda following points should be examined through the palpation examination.

Hot/Warm Touch (ushna sparsha):

- Body is felt hot in fever [11].
- The warm body is also noticed in hyperthyroidism, hypertension, anger, diabetic ketoacidosis and increased mental stress.
- The callor and dallor in inflammatory swelling [12].
- Kanta talu ushna bhava-warmness of throat and palate.
- Aushtha jivha ushna bhava-warmness of lips and tongue.

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-coldness of throat and palate.
- Aushtha jivha sheeta bhava-coldness of lips and tongue.

Hard Touch (Kathin Sparsha)

- In hepatoma, liver is felt hard, knobby and irregular like back of tortoise on palpation [13].
- The kaphaj edema is heavy, fixed, non-pitting/hard (nipidito na unnamet).
- 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

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.

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 periphery and thorny in touch.
- The 'kitibh' kushtha is blackish and rough in touch.
- Rough skin is also noticed in eczema and psoriasis.
- Rough and scaly skin is noticed in anemia.

Smooth touch (shlashna sparsha)

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

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 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 wrists.
- Rigidity in the neck can be assessed by slow flexion, extension and rotation movements.

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 respiratory system as per ayurveda: As per ayurvedic science, chest tenderness, hotness and loosened chest (avasanna vaksha) is observed in kshataj kasa (bronchitis and traumatic lung diseases) (SUT 52/11) (C.Chi.18/22). As per ayurvedic science, there is warmness in lateral chest in case of pulmonary TB. (M.N. 10/5).

“The curious examiner should palpate the ribs; lateral chest and back of the chest separately to know the remaining life span of the patient as well as to check their position whether loosened (stransan), dislocated (vyasta) or prolapsed (chyuti)”. (C.In. 3/5).

Since the organs in the thoracic cavity are enclosed in a bony cage; does not give us a chance to palpate them completely or partially. But the vibrations or the impulses transmitted by these organs can be felt. So accordingly on the basis of guidelines given by Acharyas in (S.Su.10/5) and (C.Vi. 4/7, C. Chi. 25/22); the palpation for the respiratory system can be done as follows.

Palpation of respiratory system as per modern science: With the patient disrobed, place the entire palm of each hand first on the superior portion of both hemithoraces and then, gently though firmly, move the hand inferiorly to just below the twelfth rib. Repeat the process moving laterally and subsequently anteriorly; search for rib deformities, nodules and areas of tenderness. In the face of a history of chest discomfort, ask the patient to point to the areas of greatest discomfort. Palpate the area with increasing firmness in an attempt to elicit tenderness and to assess if this manoeuvre reproduces the patient's symptoms. Pay particular attention to the costochondral junctions in patients reporting anterior chest pain to evaluate the possibility of costochondritis.

Palpation is also important in the assessment of ventilation by assessing the symmetry, synchrony, and volume of each breath. This is done by examining the patient posteriorly, placing the examiner's thumbs together at the midline at the level of the tenth rib with hands grasping the lateral rib cage; both visual and tactile observations with respect to degree of chest expansion are made both during tidal volume breathing and during deep forceful inspiration. With the latter, thumbs typically separate by approximately 2 to 3 cm. Asymmetrical expansion implies decreased ventilation to one side. This may be due to thoracic wall abnormalities, particularly those that are either associated with structural immobility or defect or pain (rib fracture). Similarly, the problem may be caused by an inflamed, fibrosed or malignantly infiltrated pleura, a unilateral pleural effusion, an interstitial pulmonary process or a complete obstruction of an airway or airways on the ipsilateral side. Functional diaphragmatic impairment or pain may be responsible for asymmetrical expansion.

Position of the mediastinum (phuphusantara): It is assessed by determining the position of the apex beat and the trachea. This is done best with the examiner stationed behind the patient, palpating the anterior inferior neck just above the jugular notch by gently pressing the fingertips between the lateral tracheal wall and the medial portion of the sternocleidomastoid muscle. Comparing one side to the other, an assessment is made for the position of the trachea. Midline or deviation away from the central position is felt. Shift of the mediastinum towards the side of the lesion indicates shrinkage of the lungs due to collapse or fibrosis. Displacement away from the lesion occurs with fluid or air in the pleural cavity. Displacement of the trachea alone is more likely in contraction of the upper lobe and shift of the apex beat alone is likely in a lesion of the lower lobe.

- Shift to the same side-collapse, Fibrosis and pleural thickening.

- Shift to the opposite side-pleural effusion, pneumothorax, hydropneumothorax.
- Central position- bronchitis, bronchieactasis, asthma, pneumonia, emphysema.

Spontaneous movement of the trachea in synchrony with the pulse suggests the presence of an aortic aneurysm.

Tactile vocal fremitus: It is the tactile perception of the vibrations communicated to the chest walls from the larynx via bronchi and lungs during the act of phonation. It occurs when the sound vibration from larynx passes down the bronchi and cause the lung and chest wall to vibrate provided fundamental frequency of the chest wall and lung should be the same as that of voice. Fundamental frequency of the female voice is higher than lungs hence TVF is diminished or absent in females. TVF is increased in consolidation, conditions that produce bronchial breathing. TVF is decreased in air or fluid filled pleural cavity, asthma, emphysema, pneumothorax, collapse (Tables 1-4).

Other vibrations

- Pleural friction rub-in pleurisy.
- Bronchial fremitus-bronchitis, asthma, COPD.
- Palpable rales-in bronchieactasis, fibrosis, lung congestion.

OBSERVATIONS

Table 1 Quality of sparsha (Touch) as per doshik variations

Vataj diseases	Pittaj diseases	Kaphaj diseases
Cool	Warm	Moist

Table 2 Characteristic 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, uneven (Visham)	Yakritodara (Hepatocellular Carcinoma)

Table 3 Tactile vocal fremitus when normal, increased and decreased

Tactile Vocal Fremitus		
Normal	Increased	Decreased
Normal Lungs	Lung Consolidation	Pleural effusion
	Lung Fibrosis	Asthma
	Above the level of pleural effusion	Emphysema

	Lung collapse	Pneumothorax
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Table 4 Position of mediastinum

Mediastinum		
Placed to same side	Central	Placed to opposite side
Collapse	Bronchitis	Pleural effusion
Fibrosis	Bronchieactasis	Pneumothorax
Pleural thickening	Asthma	Hydropneumothorax
	Pneumonia	
	Emphysema	

DISCUSSION

Palpation examination is very well described in Ayurveda. Ancient acharyas have described the tactile characteristics like soft, hard, rough, smoot, warm, cool etc. perceived through palpation in various diseases. The methodology for palpation of specific organs is observed in later Ayurvedic texts. Although the palpation of specific system is not observed in ancient Ayurvedic literature but from the generalized criteria for palpation mentioned by Charaka, Sushruta and other acharyas can be used as the guideline for carrying out the palpation of particular system. The main organs contained in the thoracic cavity are the lungs (Phuphus) and the heart (Hrudaya). Some references are found in Ayurvedic science related to chest palpation. Acharya Sushruta [SUT 52/11] and Charaka [C.Chi. 18/22], have mentioned it in reference to Kshataj Kasa (Bronchitis and Traumatic lung diseases) where they stated the chest tenderness, hotness and loosened chest (AvasannaVaksha). Acharya Madhava [M.N. 10/5] had mentioned that there is warmness in lateral chest in case of Rajayakshma (pulmonary TB). Acharya Charaka, in Indriyasthan [C.In. 3/5], mentioned that curious examiner should palpate the ribs, lateral chest and back of the chest separately to know the remaining life span of the patient as well as to check their position whether loosened (Stransan), dislocated (Vyasta) or prolapsed (Chyuti). This can be applied to the position of mediastinum and shift of trachea. In the same shloka, there is reference to examine the pulsating areas. This can be applied to the tactile vocal fremitus and also to assess the apex beat of the heart and its change of position in case of cardiomegaly. Thus ancient criteria of palpation can very well be applied to respiratory system in today's context also.

CONCLUSION

- The concept of palpation examination is very well documented and explained in ancient Indian medical science; Ayurveda.
- The palpation examination offers the clue for diagnosis of some of the respiratory diseases.

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