




Diagnostic Evaluation and Management of Acute Abdomen in Ayurveda- A Conceptual Study

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ABSTRACT:

Introduction: Acute abdomen is a condition which requires urgent attention and immediate treatment. The patient usually presents sudden onset of abdominal pain which is intolerable and also associated with other symptoms. In Ayurveda, the word *Mahagada* has been used for the lethality of the disease (in which there is fear of loss of life) and the word *Atyayak* has been used for emergency. Charaka Samhita and Susruta Samhita mentioned three such diseases under *Ashta mahagada* in which urgent or prompt treatment is asked and if the treatment is not done, death is certain.

Material & method: Ayurvedic Samhitas, Modern books, and other manuscripts related with this topic are collected and a comparative study has been done.

Result: Knowledge of acute abdomen is scattered in Ayurvedic Samhita. So, through this work we are trying to compile all the available details regarding the same and compare with modern science.

Discussion: Ayurveda describes both conservative and surgical treatment options for acute abdomen. Acute abdomen can be managed extremely successfully with the use of *Vedhana Nasaka*, *Sholaprasamana Maha Kashaya*, *Sophagna Maha Kashaya/Sopha Nasaka Oshadha* (Anti-inflammatory Drugs), *Agni deepana oushadha – deepaniya mahakashaya* (Appetizers) etc.

Keywords - Acute abdomen, Shola, Emergency, Udara.

INTRODUCTION

The acute abdomen remains a challenge to surgeons and other physicians due to its severity. Abdominal pain is the most common cause for hospital admission in these times. Since the term acute abdomen inherently implies a suddenness of onset, the clinical course of abdominal

symptoms can range from minutes to hours to weeks according to the stage of patient. Furthermore, the acute abdomen can present as acute exacerbation of chronic problems, such as chronic pancreatitis, vascular insufficiency, metabolic abnormalities, or collagen



vascular diseases. The term, acute abdomen, is often used synonymously for a condition that requires immediate operative intervention. Those patients, who require immediate operation, represent only a subset of patients with an acute abdomen. This article is devoted entirely to the discussion of the patient with an acute abdomen in comparison with Ayurveda references. Most of the people are not aware that these conditions are also mentioned in ayurveda in detail with diagnostic and management protocol. The problem for ayurvedic students is that entire acute abdomen correlations and explanations are scattered around various Samhitas. Due to this there is an inconvenience in understanding and practical aspects of diagnosis. Through this article my intention is that to compile all the available information of acute abdomen in ayurveda with diagnostic evaluation and management in comparison with modern science.

MATERIAL AND METHODS

Ayurvedic Samhitas, Modern books, and other manuscripts related with this topic are collected and a comparative study has been done.

Conceptual Study

Diagnostic evaluation

Ayurveda put forward *Rogi pareeksha* (examination of patient), which can be done through three steps, *Darshana* (Inspection), *Sparshana* (Palpation), *Prashna* (Interrogation)¹.

History / *prashna*

By interrogation Physician can get details of nature off habitat, time, caste, accustoms, causes for onset of diseases, exacerbation of the symptoms, strength, nature of internal(digestive) fire, excretion of flatus, urine and faeces etc.

- 1) *Desa* (Nature of habitat)
- 2) *Kala* (Time)
- 3) *Jati* (Religion)
- 4) *Satmya* (wholesomeness)
- 5) *Vedana* (pain)
- 6) *Bala* (strength of patient)
- 7) *Antaragni* (*Paachaka agni*) *pareeksha*
- 8) Gender
- 9) Occupation
- 10) Personal history

After thorough examination of *Roga* (disease) and *Rogi* (patient), physician come to the conclusion of *Nidana*(causes), *Poorvaroopa* (Premonitory symptoms), *Lakshana* (Clinical features), *Samprapti* (Pathogenesis),

Upasaya and Chikitsa (Treatment) of that disease.

Clinical features of acute abdomen as per Ayurveda and Contemporary view Pain

- Relation with pain.
In *Ayurveda dosha* predominance can be identified by the time of pain occurrence. The pain manifest at morning is *Kaphaja shola*, *Pittaja* and *Vataja shola* develops at noon and evening respectively².
Kukshi shola can be manifested all of a sudden, which is not relieved by any measures. Recurrent manifestation of pain is also explained as *kukshi shola*.
- Aggravation of pain.
In case of *Ashmari* pain aggravates during running, jumping, swimming, riding, exposure to sunlight, long walk etc³. In *Kukshi shola* patient will not get relief from pain even by sitting standing and lying down position⁴. In *Parinama shola*, pain starts only after the digestion of food and patient will get relief by vomiting.
- Position of pain
Epigastric region (*Hridaya pradesha*) – *Parinama shola*³.
Umbilicus region and small gut obstruction (*Nabhi pradesha*)– *Pittaja shola*².
Lumbar region and large gut obstruction (*Parswa pradesha*)- *Vataja shola*².
Hypogastric region (*Vasti pradesha*) – *Chidrodara*⁷.
Whole abdomen (*Diffuse peritonitis*) – *Udara*¹⁰.
Umbilicus, penis – *Ashmari*¹².
- Radiation of pain
Tuni – *anuloma* direction. Pain from *Mutrasaya* to *Guda* or *Upasta*.
Pratituni – *pratiloma* direction. Pain from *Guda* to *Pakwasaya*⁵.

Vomiting

- The one who vomit something at evening, which was taken in the morning⁶.
 - Assessment of vomiting whether it is before or after food.
 - The patient vomit materials having smell of faeces and that condition is mentioned in *Baddhagudodara*⁷.
 - Vomiting of materials having smell of *mala and mutra* is seen in *Asadhya sannipataja chardi*⁸.
 - After vomiting pain get relieved in *Parinama shola*.
 - One vomiting something with froth, pus and blood is considered as *Seegra mrityu*⁹.
- ### *Apana vayu vaigunya*
- Retention of feces and urine, distension and stasis of *Vata* of abdomen – *Baddhagudodara*¹⁰.

- Feces get obstructed in the rectum and excretes with difficulty in small quantity. Here abdomen enlarges greatly in between heart and the umbilicus. – *Baddhagudodara*.
- Due to accumulation of hair ingested along with food, or due to piles or paralysis of intestines the *Apana vayu* gets provoked and impairs digestive fire. *Partiloma gati* (Movement in the opposite direction) of *Apana vayu* happens and obstructs *mala* as well as *mutra* and there by abdomen get enlarged¹¹.

Mutra visarga

- *Mutrashmari* – Urination with severe pain (Dysuria)¹².
- Urination with blood and pain full urination as drop by drop¹³.

Previous history

- *Avarudha kamala or Sakhasrita kamala* – The patient is passing stools of the color of the paste of *Tila* or white¹⁴.
- *Rakta vamana* – By the accumulation of blood in the abdomen patient vomit blood and also there will be enlargement of abdomen. The patient also has severe abdominal pain¹⁵.
- *Sokaja atisara* or Peptic ulcer – Elimination of blackish red colour feces¹⁶.
- *Chidrodara* – Elimination of greenish red colour feces and slimy in character¹⁷.

Drug reaction history

Acharya Susruta and *Acharya Madhava* mentioned *Oushadhaja jwara* and *Lakshana* that includes *Murcha*, *Sirovedhana*, *Vamana*, *Kshavadhu* etc¹⁸. *Acharya Charaka* also described complication caused due to improper medication in first chapter *Chikitsa stana* and here comes the importance of *Rasayana*¹⁹.

Family history

According to *Acharya Susruta*, some diseases are caused by mutations that are inherited from parents and are present in an individual at birth like *Kushta*, *Arsha*, *Prameha*, *Kshaya* etc. They are mentioned as *Adibala or Kulaja Roga*.

General examination

Ashtavidha pareeksha is mentioned for the assessment of patient which includes *Nadi*, *Mutra*, *Mala*, *Jihva*, *Sabda*, *Sparsha*, *Drik*, *Akriti*.

- ✓ *Nadi pareeksha*

This can be found out by examination of *Nadi* as it shows *Seegragamani* and *Ushna* rhythm of pulse in case of fever.

✓ Respiration

In *Kukshi shoola* – The patient breathes with difficulty and also becomes breathless as he is troubled greatly by pain.

- *Chidrodara* – Breathing difficulty can be seen²⁰.
- *Rakta poorna koshta* (Internal hemorrhage) – Increased respiratory rate²¹.
- *Jwara* – *Teevra swasa*²².

✓ Body temperature

Specific character of *jwara* itself is increased body temperature, especially in *abhigathaja or agantuja jwara*. Ayurveda says there will be increased temperature to both body and mind.

✓ Facial expression

Acharya Kasyapa says the condition of the patient will be expressed in his face whether he is painful, happy or bad²³.

- Hippocratic facies – generalized peritonitis - Cold and clammy extremities, sunken eyes, dry tongue, thready pulse, drawn anxious face.
- *Rakta poorna koshta / Bhinna koshta*– Cold extrimities²⁴.
- *Netra (Arishta lakshana)* – when the eyes are deeply sunken and open continuously, it shows the person is going to die soon.
- *Prana nasini nadi* – when the vital pulse is very weak, this is also *Arishta lakshana*²⁵
- *Arishta lakshana of face and tough* – The patient whose face, tongue and head become crooked, and tongue become thorny these are the signs of rapid loss of life²⁶.
- *Manya sparsha* (Carotid artery) – Feeling of less pulsation in both carotid artery is also sign of loss of life²⁷.

✓ Attitude

- *Kukshi shola* – The patient will not be comfortable even in lying position, and sitting²⁸.
- *Mamsadhatugata jwara* – Convulsions of upper and lower limbs²⁹.

Last stage of peritonitis – Throwing of bed clothes, tossing of head, in effective movement of the hand and feet, tossing on bed

- *Pandu* – Eyes faces and all body will be look pale³⁰.
- *Kamala* – Eyes and body will be yellowish color. Feces will be like paste of *Tila* or white.

Localized examination

Inspection

- Skin of abdomen
 - *Vrana vastu* (operative scar).
 - Absence of skinfold³¹.

- *Nabhi* – Flat umbilicus and everted umbilicus.
- Dilated vein with blue red color³².
- Contour of abdomen
- *Baddhagudodara* - Bulged area between heart and umbilicus.
- Small gut obstruction – central distension
- Large gut obstruction- peripheral distension
- *Chidrodara* – Bulging below the umbilicus.
- *Plihodara* – Bulging like the back of tortoise at left side³³.
- *Antra vridhi*
- Swelling- enlarged like a bag of air³⁴.
- Expansile swelling, Reducibility (su ni 12/9) and also Peristaltic movement are assessed.

➤ **Palpation**

- *Sitoshna* (Cold and hot) – Temperature.
- *Mridukatina* (Soft and hard) – Consistency.
- *Slakshna karkasha* – Surface- Smooth/Irregular.
- *Sparshasaha* – Tenderness.
- *Sparshadwesa* – Hyperesthesia.
- *Stabdham* – Muscle guarding – Voluntary.
- *Daruna* – Rigidity- Involuntary.
- *Satatam Spandhamaanam* – Pulsation.
- *Sirograndhi* – Aortic aneurysm.

➤ **Percussion**

By this method tenderness and accumulation of fluid and air in the abdomen can be assessed.

Vayu- Air Resonance (cha chi 13/25)

Fluid – Dullness (cha chi 13/25)

Special Examination

Rakta pareeksha (Examination of blood)

Blackish discoloration of blood and sometimes associated with froth³⁵.

Even dogs also reject this type of blood as it is not good enough³⁶.

Guda pareeksha (Examination of anus)

Arshobramsa, *Vidradhi* (can be correlated with Pelvic abscess), *Antrasammoorchhana* (can be correlated with Intussusception), Balloning of rectum-IO, Perforation- Tenderness will be present in these cases.

Mutra Pareeksha (Examination of urine)

- *Mutra Sarkara*
- *Mutra Taila Bindhu pareeksha*
- *Alaala meha* – urine like threads and slimy.

- *Sa rakta mutra* (Hematuria).

Pureesha pareeksha (Examination of stool)

- *Sakhasrita Kamala* – Colour similar to paste of Tila³⁷ – Silvery stool.
- *Sannipataja Atisara* - Colour similar to water which used to wash meat³⁸ - Steatorrhoea
- *Sokaja Atisara* – Colour of blackish red, *kakanantika*³⁹ – Melena
- *Kshaya (Rajayakshma)* – Black color⁴⁰.
- *Revati graha*– Green color⁴¹.
- *Vataja grahni* – *Ama mala* with froth⁴².

Examination through *Nadi yantra*- Tubular instruments are some with opening at one end only and some with opening at both ends. These are useful for extracting foreign bodies from the *Srotas* (channels, minute pore etc.), to observe the abnormalities inside, for sucking (vitiated fluids like blood, pus etc.) and for convenience of other functions surgical and medicinal activities etc.

Instruments used in current era - Endoscope (ERCP), Cystoscope, Laparoscope, Proctoscope etc.

Importance of modern investigation tools

Some findings get escapes by direct observation in following conditions⁴³ –

- When it is either too small.
- Too close or too remote from the observer.
- When it is obstructed by other objects.
- When there is some defect in the perceiving sense- organ.
- When the observer’s attention is elsewhere.
- When the object is merged in the mass, when it is over shadowed by something else, or lastly.
- When it is microscopic.

Treatment

Conservative management (*Bheshaja chikitsa*) and Surgical management (*Sastra chikitsa*) can be done in case of acute abdomen according to the condition of patient⁴⁴.

▪ **Conservative Management**

➤ *Bheshaja chikitsa* –

This can be divided into two that with medicine or *dravya* and without medicine or *adravya* (no phytotherapy treatment)⁴⁵.

Adravyabhuta chikitsa

1. *Langhana*⁴⁶ (Nil by mouth)
2. *Maruta sevana* or *Vishnupaadamruta*⁴⁶ (Oxygen)

3. *Achooshana karma by Nadi Yantra*⁴⁷ – Aspiration by Ryle’s tube.
4. *Rogi k muhurmuhur nireekshna* – Vital part monitoring Pulse, BP, Respiration rate, Temperature, Chart of fluid input and output these should be monitored before and after surgery or any procedure.
5. *Samsodhana karma visodha*⁴⁸ – *Virechana, Niruha vasti, and Vamana* is contraindicated in *Chidrodara* and *Badhhagudodara*.

Dravyabhuta chikitsa.

Treatment with medicine can be done through these group of drugs and their correlation with modern drugs.

1. *Vedhana nasaka*⁴⁹, *Vedana sthapana mahakashaya* – Analgesic drugs.
2. *Sholaprashamana maha Kashaya*⁵⁰ - Antispasmodic drugs.
3. *Sophagna maha Kashaya/Sopha nasaka oushadha*⁵¹ - Anti-inflammatory drugs.
4. *Agni deepana oushadha* – *deepaniya mahakashaya*⁵² - Appetizers.
5. *Rakshogna mahakashaya- Krimigna mahakashaya*⁵³ – Antibiotics and Antimicrobial drugs. Eg ; Surasadi gana etc.
6. *Mala mridukaaraka and vatanulomaka oushadha* – Carminative and mild Laxative.

Drava prayoga

1. Luke warm water is allowed to intake which is *Deepana, Trishna nasaka, Kaphavata samaka, Vasthisodhaka*⁵⁴.
2. Intake of coconut water is beneficial in case of dehydration and it is *Snigdha, Swadhu, Hima, Hridya, Deepana, Vastisodhana*.
 - *Acharya Susruta* says *Narikelodaka is Vrishya, Pipaasagna, Pitta samana*⁵⁵.
3. *Dugda prayoga* – After 7-10days of medication *Udara rogi* should take milk⁵⁶.
4. *Ahara* – *Laja* etc are used in *Chardi, Atisara, Deepana and Kaphanaasana. Balya, Kashaya, Madhura, Laghava, and Tritmalaapaha*⁵⁷.

Sastra chikitsa

Trividha karma – *Poorva karma, Pradhana karma, and Paschat karma* are the three steps of any surgical procedures⁵⁸.

- *Poorva karma* – This step includes preparation of patient, physician attender and operation room etc.

 1. *Yantra, Sastra, Upakarana*.
 2. Dressing material like swab, Gauge piece (*vikesika*), Cotton pad (*kavalika*), Cotton bandage (*sookshma drida*

patta), Linen sheet (*vastra*) etc.

3. *Soochi* – *Vrita* (Round body), *Dhanuvakra* (Curve needle), *Tridhaara* (Cutting body), *Riju grandhi* (Straight needle)⁵⁹.
4. *Seevana sutra* – Silk -non absorbable thread (*Sookshma kshouma sutra*).
 - Ligament – Absorbable thread (*Snayu sutra*).
 - Catgut – *Antra sutra*.
5. *Oushadha* – *Madhu, Ghritha, Muleti, Rakta sthambaka dravya, Agni, Salaaka* etc.
6. *Jala* – Pure cold water, Luke warm water.
 - Preparation of Patient
 1. Patient should be empty stomach in *Arsha, Bhagandhara, Asmari, Udara, Mugharoga, Muda garbha*.
 2. Preparation of Nail and Hairs.
 3. Informed Consent form⁶⁰.
 - Operation room should be clean and directed towards north.
In normal environment which is not too much hot or too much cold is advisable. *Agni* of the patient should be evaluated before surgery.
 - Preparation of surgeon
 - Nails should be cut and clean. Hand wash should be done in 6 steps.
 - Hair mask and face mask should be used.
 - Operation table
 - Even table which is covered by clean cloth.
 - Position of patient – *Uttana asana* Supine position⁶¹
 - Conformation of patient
 - Tikshna madhyapana* – In current times anesthetic drugs and methods are used instead of *tikshna madhyapana*.
 - *Pradhana karma*
 - Udarapatana stana* (Types of Incision)
Incision should be done in 4A distance with umbilicus in left side.
 - Types of Incision
 1. *Tiryak bedana* – Oblique incision – Grid iron incision – Appendisectomy kocher incision -Cholicystectomy.
 2. *Riju bedana* – Transverse Incision – Midline incision
 - Direction of incision
Anuloma direction which is the direction of hair. And during incision surgeon should be take care of the surrounding *Marma, Sira, Snayu, Sandhi, Asthi, and Dhamani*⁶².
 - Incision should be done in one stroke and should be removed immediately.
 - Shape of wound
 1. *Aayatha* – Adequate length of wound.

2. *Visala* – Extensile wound.
3. *Suvibakta* - All layers of the *twak and mamsa* (skin, fascia, sheath, peritoneum) are cleanly incised.

Udara aavarana

- According to *Ayurveda* skin is of 7 layers and muscle is 5 layers⁶³.
- According to Modern science there is 7 layers of skin and 5 layers of muscle.

Muscle:

1. External abdominal oblique
2. Internal abdominal oblique
3. Transverse abdominis
4. Rectus abdominis
5. Pyramidalis

Examination of *koshtanga* and get to know the diagnosis of disease.

1. *Badhagudodara* – Removal of *Kesa* (Tricobezoar), *Anna* (Phytobezoar), *Ashma* (Gallstone ilius), *Udaraad* or *Antrada krimi*(worms).
2. *Antrasammorchana*
3. *Chidrodara*
4. *Patta bandhana*

➤ *Paschat karma*

1. Rogi may be conscious, semiconscious or unconscious after the surgery, so that trolley is required for the shifting of patient and attender should be very careful.
2. After surgery patient should be instructed about *oushadha, ahara, vihara*.
3. *Patta bandhana*
4. *Dhoopana karma*
5. If the patient is positive there will be fast recovery from the wound.
6. After surgery patient should not lie down for long period, he should start standing and walking step by step.

RESULT

Correlation of acute abdomen in Samhita⁶⁴

1. *Gulma* – Intestinal colics-ileitis, Colitis, Chrons disease, Appendicitis, Appendicular abscess.
2. *Badhagudhodaram*- Intestinal obstruction.
3. *Chidrodaram* – Perforation (Peptic ulcer, Typhoid ulcer, Traumatic, Ulcerative colitis, Perforation)
4. *Pleehodaram*- Splenomegaly, Spontaneous rupture of malarial spleen.
5. *Yakritalyudara / Yakrit vidradhi*-Hepatomegaly, Amoebic

liver abscess.

6. *Kukshi vidradhi*-Subdiaphragmatic (subphrenic) abscess due to perforated peptic ulcer, abdominal trauma, appendicular abscess.
7. *Aantra sammurchhana / Aantra parivartana*-Intussusception/Volvulus.
8. *Undukapuchha sodha / Vankshanastha vidradhi* - Acute appendicitis.
9. *Vankshanastha gulma* - Appendicular abscess.
10. *Stree roga- Garbhakosha sanga-Muda garbha*-Ruptured ectopic gestation.
11. *Avarudha kamala*-Cholelithiasis Amoebic liver abscess, Cholangitis, Biliary stricture, Cholangio Carcinoma, Carcinoma of pancreas.
12. *Mootrasmari*-Ureteric colic, Ureteric Calculus.

DISCUSSION

Acute abdomen is an emergency condition in which patient can't tolerate the pain and also requires urgent management. In ayurveda such conditions are correlated with *gulma, udara, vidradhi, sula* etc. The major clinical presentations are pain, vomiting, *apana vayu vaigunya, mutra visarga*. Relation of symptoms with time, intake of food etc helps to reach exact diagnosis. Previous history should be assessed well. Color of stool gives idea about disease like *sakhasrita kamala*, type of *atisara* etc. General and local examination is very important which includes inspection, palpation and percussion. Through inspection bulged area between heart and umbilicus seen in *Baddhagudodara*, bulging below the umbilicus-*chidrodara*, bulging like the back of tortoise at left side-*Plihodara*. Ayurveda also focuses on *rakta pareeksha, guda pareeksha, mutra pareeksha, pureesha pareeksha* and these helps a physician in throughout the treatment. In this current era most, modern techniques are there so that accurate diagnosis can be done within no time. Conservative and surgical management is explained in ayurveda in the management of acute abdomen. *Vedhana nasaka, Sholaprasamana maha Kashaya, Sophagna maha Kashaya/Sopha nasaka oushadha* (Anti-inflammatory drugs), *Agni deepana oushadha – deepaniya mahakashaya* (Appetizers) etc are available and very effective in the management of acute abdomen. Drugs belong to *Krimigna mahakashaya act as* Antibiotics and Antimicrobial drugs. Surgical management is also explained in Samhitas in detail including *poorva karma, pradhana karma, paschat karma*. Incision and its types are well narrated. Along with *pradhana karma paschat karma* is also most important.

CONCLUSION

India and other South Asian nations practice the traditional medical system known as ayurveda. Herbs, minerals, heavy metals, or animal products may be included in ayurvedic medicines, which come in both standard and non-standard forms. The wide range of differential diagnoses for acute abdominal pain—from benign to life-threatening, intraabdominal to extra abdominal, and organic to nonorganic—presents a substantial challenge to medical professionals. The areas of the abdomen are used as a guide to help identify potential etiologies when building a differential diagnosis for acute abdominal pain. Conditions of acute abdomen may be different and those are well narrated in Ayurveda including causes, clinical features and treatment. In treatment both *aushadha chikitsa* and *sastra chikitsa* are explained.

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