

UNDERSTANDING OF YAKRUTA VIDRADHI W.S.R TO LIVER ABSCESS

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ABSTRACT

The diseases *Vidradhi* (abscess) is a common ailment Annoying humankind and incapacitate the sufferer for his routine work. *Acharya Sushruta* and *Charaka*, described *Yakruta Vidradhi* under *Abhyantara Vidradhi*, *Vidradhi* is likewise mentioned and reflect the symptom of thirst and grim breathing it can be correlated with Liver abscess. Liver Abscess is a mass full of pus within liver. Liver abscess generally results from microbial contamination of liver parenchyma through an arterial or portal system or from a direct spread by contiguity. However, two foremost types Are acknowledged amoebic and pyogenic, in medical literature. Pyogenic liver abscess constitutes chief bulk of liver abscess in western countries. The diagnosis is confirmed

by means of ultrasonography, reddish brown anchovy pastes like material aspirate from abscess. The diagnosis treatment and prognosis, of liver abscess have advanced remarkably over past few years. Imaging has enhanced diagnostic competence and has altered therapeutic strategy. Common presentation of liver abscess is fever, chills, right upper quadrant pain, malaise etc. The pathophysiology of abscess is distinctive depending on the etiology and requires different strategies for diagnosis and management. Hence an attempt is made to understand *Yakruta Vidradhi* in relation to liver abscess.

KEYWORDS: Liver abscess, *Yakruta Vidradhi*, Risk factors.

INTRODUCTION

Vidradhi is a Rakta Dushti Vikara which undergoes rapid suppuration followed by Pooya formation.^[1] Antarvidradhi^[2] is a Vidradhi bheda which develops in relation with koshta. Ahitakara Nidana Sevana leads to Dosha Prakopa in the Koshta which takes Sthanasamshya in Rakta Mamsa Dhatus of different Adhistana that leads to Shopha and Sheegra Vidhahitwa, then Rakta and Mamsa gets Pooya Sanchaya forming Pakwa Shopha and leads to Vidhradhi.

The liver is well known organ for Ayurveda. In *vedas* it is named as “*Takima*” or “*Yakna*”.^[3] Synonyms like *Kalakhanda Jyotisthana*, *Yakrutakhanda*, *Ykrutpinda*, *Raktadhara* and *Raktashaya* are found in ancient literature. Many acharyas have stated that main function of *Yakruta* is offer red color to *Rasa Dhatu*, i.e. *Ranjana* of *Rasa dhatu*. In relation to the development of body parts, *Yakruta* is developed or generated from *Matrujabhava*,^[4] as stated by *Acharya Sushruta* and *Charaka* in *Sharira Sthana*. *Acharya Sushruta* in *Sharira Sthana* states that *Yakruta* is also engendered from *Rakta Dhatu*. The site of the liver is below and right to the heart.^[5]

Sushruta has explained ten different sites of *Antarvidradhi*, among that *Yakruta Vidradhi* is also mentioned and reflect the symptom of difficult in breathing and excessive thirst and it can be correlated with liver abscess.^[6]

Liver abscess^[7]

Liver abscess are relatively uncommon in the western countries, but in india and the Asian countries, they continue to present in the outpatient with regularity. Though the mortality has considered decreased, the morbidity and associated loss of man hours are concern. In world literature mainly two major descriptions for aetiology is known, amoebic and pyogenic.

Pyogenic liver abscesses, result from ascending biliary tract infections, hematogenous spread via portal system, generalized septicemia with involvement of liver by way of hepatic arterial circulation, direct spread from intra-peritoneal infection and other causes. *Escherichia coli*, *Klebsiella*, and *streptococcus* are most commonly found organism followed by *staphylococcus* and *pseudomonas*.

Amoebic liver abscess, is also called Tropical abscess (dysenteric abscess). It is the commonest extraintestinal manifestation of amoebiasis. This disease is caused by *Entamoeba*

histolytica. It is almost always a complication of amoebic dysentery. This can occur in the acute stage or in the chronic carrier stage.

CLINICAL FEATURES

Alcoholic males and debilitated men suffer more, probably because of poor immunity. Tender hepatomegaly, low grade or high-grade pyrexia with abdominal discomfort are the main features of pyogenic liver abscess whereas, Severe pain in the right hypochondrium with low grade fever, weakness, anorexia, etc. are symptoms of amoebic liver abscess.

- High grade fever with chills and rigors develop if the stage proceeds to pyogenic liver abscess due to secondary bacterial infection of amoebic abscess.
- Thoracic symptoms such as nonproductive cough, pleurisy and right shoulder pain are common.

Signs

- Anemia, emaciation, toxic look and an earthy complexion is present.
- Jaundice may be present if abscesses are multiple, due to compression of biliary radicles. However, it is rare (15%). It is of cholestatic variety.
- Liver is enlarged in the right hypochondrium, tender and soft (liver enlarges in upward direction)
- Intercostal tenderness differentiates it from acute cholecystitis. Intercostal edema can also be present

Diagnosis

- Total WBC count is raised.
- Stool routine examination: Amoebic cysts, culture and sensitivity for typhoid bacilli.
- Abdominal ultrasound and ultrasound-guided aspiration (anchovy-paste like material) establishes the diagnosis.
- When in doubt, CT scan can be done, followed by FNAC which draws frank pus. Pus is sent for Gram's stain, culture and sensitivity. CT also helps in the diagnosis of associated conditions such as diverticulitis of the colon.
- Sigmoidoscopy may demonstrate large, deep amoebic ulcers-flask shaped.

TREATMENT

It can be classified into:

1. Conservative

2. Ultrasound-guided aspiration and pigtail drainage
3. Surgery-drainage

I. Conservative line of management

- It is indicated in amoebic hepatitis. Tab. Metronidazole 400-800 mg, 3 times a day is given for 14 days. The only recognisable side-effect is metallic taste.
- If the condition does not improve, injection Emeline 1 mg/kg body weight to a total of 60 mg/day deep IM for a maximum of 6 days is given. Side-effects and precautions during emetine therapy.
- Absolute bed rest during treatment (because of these complications, it is not used nowadays)
- Adequate hydration, rest, analgesics to relieve the pain. Improvement can be seen within one to two days in the form of disappearance of pain, fever and return of appetite.

II. US-guided needle aspiration/pigtail catheter drainage

- It is indicated in cases of amoebic liver abscess.
- Before it is aspirated, bleeding profile (BT, CT, PT) should be normal and injection vitamin K 10 mg, IM should be given for at least 3 days.

Complications

1. Bleeding-rare
2. Incomplete aspiration results in leakage of pus and bile into peritoneal cavity which may produce peritonitis. Hence, prophylactic antibiotics need to be given before and after the procedure along with metronidazole therapy.

SURGERY (OPEN DRAINAGE) AND LAPAROSCOPIC

Indications

1. Failure of US-guided needle aspiration.
2. Ruptured amoebic liver abscess with amoebic peritonitis.

Procedure

- Laparotomy is done first. Abscess cavity is identified. Contents are evacuated, a thorough peritoneal wash is given and a self-retaining Malecot's catheter (any tube drain) is introduced into the abscess cavity, brought outside and connected to a bag. With the advent of metronidazole, Amoebiasis Cutis is rarely seen. Hence, catheter can be safely

placed inside the cavity and brought out. Malecot's catheter is now being replaced by other tube drains.

- Postoperatively for 3-5 days, necrotic liver tissue, anchovy sauce pus and blood drain outside Residual pus.
- Once the drainage becomes minimal, Malecot's catheter is pulled out.
- Same procedure can be done by laparoscopic method.

TREATMENT ACCORDING TO AYURVEDA

Acharya sushruta practice *Bhedana Karma* and *Siravyadha*^[8] in *Antarvidradhi* as emergency management in order to save the life of the patient which high lightens the importance of *Shalya Chikitsa* as *Pradhanatama*.

Samanya Chikitsa

- *Apakwavastha*- *Rakta Shodhana*, *Rakta Prasadana*
- *Pakwavastha*- *Bedhana*, *Shodhana* and *Ropana*

Samanya chikitsa in Apakwa Avastha^[9]

- *Varunadi Gana Aushadhas* with *Ushakadi Gana Churna* as *Kashaya Pana*
- *Virechana* with *Ghrita* preparation
- *Asthapana* and *Anuvasana*
- *Madhu Shigru* with suitable *sahapana*

Vatika-Dhanyamla

Paittika-Jala

Kaphaja-Gomutra

- *Guggulu*, *Shilajatu*, *Shunti*, *Suradaru Prayoga*

Samanya chikitsa in Pakvavstha

- *Bhedana* or enhance the spontaneous *Visravana*.
- Intake of *Madhusigru* and *Varunadi Gana Aushadhas* with *Sahapanas* like *Maireya*, *Surasava*, *Amla kanji*
- *Virechana* with *Trivurta*, *Tilwaka Ghrita* daily in the morning.
- All the treatments should be followed by *Pathaya Ahara Seva*

DISCUSSION

Most of Liver abscess are monomicrobial, it is not unusual to see polymicrobial infections. Management of liver abscess includes placement of catheters, laparoscopic drainage and open surgical methods. Successful treatment of liver abscess requires the use of appropriate antibiotics, antimicrobial drugs along with percutaneous drainage. Early diagnosis and treatment of liver abscess is important to prevent complications. *Antaravidradhi* is a *Daruntara Roga* which needs an early diagnosis and management. Even though *Yakruta Vidaradhi* is one among *Abhyantara vidhradhi*, it can be managed with *Abyantara Chikitisa* along with the Shastra Karma.

Immunity is highly related with the onset of *Antaravidradhi* in relation with the abscess. So *Balyakara Ahara*, *Balya Vihara* and *Rasayana Aushadhis* can be advised to the patients to get complete relief from such conditions to prevent the reoccurrence.

CONCLUSION

Liver abscess, pyogenic or amoebic continue to be a problem both in the developed and under developed regions of the world. Though effective antibiotics and chemotherapeutics and image guided drainage modalities are easily available to be treating clinician today, the need for early diagnosis in the face of nonspecific presentation remains challenge.

Sushruta Acharya says *Bhedana* and *Siravyadha* in *Abhayantra Vidaradhi*. *Antaravidhradhi* is a lifethreatening condition which needs *Chikitisa* in the *Apakwavastha* itself, so prevention is better than cure. Follow *Pathaya* and *Apathya*, try to follow *Sadvritha* so that a healthy life is waiting for all and also for coming generation.

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