A single-case study of management of Jalodara (ascites)

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Abstract

Most common manifestation of liver dysfunction is ascites and most common cause of ascites is liver disease. Ascites is the accumulation of fluid in the peritoneum. Inspite of advanced medical facilities, still, there is no sure treatment which cures a patient of ascites totally. The modern treatments only provide provisional relief with time dependent recurrence but, the fluid gets collected in the abdominal cavity repeatedly. In such case, Ayurvedic treatment gives relief without any side effect, in such cases and can be correlated with Jalodara (ascites) which mentioned in Ayurveda medical science. Diet restriction, medicinal treatment and surgical procedure are mentioned in Samhita. Diet restriction is an important feature of the management of this condition. A 46-year-old female came to outpatient department with anorexia, abdominal distension, vomiting after meal, respiratory distress etc. She was given Nitya Virechana (daily therapeutic purgation) with Abhayadi Modaka, cow’s urine, Sharapunkha Swarasu, Panarnava Kwatha, etc. and restricted diet plan for 3 months. After 3 months, a significant improvement was noted in all the symptoms of the patient. Hb% was also increased from 35 mm/h to 10 mm/h and 1.2 mg/dl to 0.9 mg/dl respectively. Ultrasonographic findings also showed improvement in comparison with previous report. Hence, it was concluded that Ayurvedic management gives relief in ascites.

Keywords: Ascites, Ayurveda, diet restriction, Jalodara, Nitya Virechana

Introduction

Ascites is a gastroenterological term for an accumulation of fluid in the peritoneal cavity that exceeds 25 ml.[1] Ascites can be considered in Ayurveda under the broad spectrum of Udararoga (diseases of abdomen).[2] Among Tridosha, the Prakupita Vata (aggravated Vata) gets accumulated in Udara between Twaka (skin) and Mamsa (muscles tissue) leading to Shotha (swelling); this is being termed as Udararoga. [3] Vata is one of the prime causative factors in the manifestation of Udararoga.[4]

Along with the aggravated Vata, Agni (digestive fire) which is Manda (low) also causes Udararoga.[5] Hence, there are multiple factors involved in the causation of Udararoga. In other terms, Udara is manifested because of vitiated Rasa Dhatu portion which gets extravaged from Koshtha and Grahani gets collected in Udara.

Ascites as a disease has been described extensively in Ayurvedic literature along with medical treatment and surgical procedures related to the management of this condition. Diet restriction is an important feature of the management of this condition.

Ayurvedic management with drugs such as provocation of digestion, daily therapeutic purgation, stimulant for hepatic function and only milk diet that acts on root of pathology of ascites and by breaking down of pathogenesis gives good result in ascites.

Case Report

A 46-year-old female [figure 1] came with following chief complaints: anorexia for 1.5 years, abdominal distension for 1 year, vomiting after meal for 8 months and respiratory distress, generalized weakness, disturbed sleep and bilateral pedal edema for 6 months.

History of present illness

The patient was alright before 2 years. After that, the patient had low grade fever and after investigations,
diagnosis of malarial parasite was done. After treatment of malaria fever was subsided, she had pain in the right and left hypochondriac region, for which she started using analgesics frequently without prescription. Thereafter, the patient felt anorexia, vomiting and heaviness of abdomen, respiratory distress, pedal edema etc. For this, the patient took allopathic medicine for 2 months but did not got relief, hence she came to Panchakarma Department, Government Akhandanand Ayurveda Hospital, Ahmedabad and was admitted to the indoor patient department for daily observation.

**Past history**

- History of malaria before 2 years

**Table 1: Investigations before and after treatment**

| Parameters                  | BT  | AT  |
|-----------------------------|-----|-----|
| Hematology parameters      |     |     |
| Hb (%)                      | 7.5 | 11.2|
| TLC (cells/cumm)            | 9800| 7700|
| RBC (million cells/mcl)     | 4.3 | 5.1 |
| ESR (mm/h)                  | 35  | 10  |
| Total protein (g/dl)        | 3.8 | 2.3 |
| Serum creatinine            | 1.2 | 0.9 |
| HBsAg, hepatitis A, hepatitis C antibodies | Negative | Negative |

**Imaging**

- USG abdomen
  - Moderate ascites
  - Mild hepatomegaly
  - Massive splenomegaly
  - Gallbladder calculi measured 2.8 mm in size
  - No any significant abnormality detected

**Table 2: Treatment schedule of patient**

| Date            | Medicine                          | Dose     | Anupana        | Time         |
|-----------------|-----------------------------------|----------|----------------|--------------|
| 22/8/2013 to   | Gomutra (Cow urine)               | 50 ml    | Luke warm water| 1 time/day   |
| 28/8/2013       | Trikatu Churna (powder)           | 5 grams  | Luke warm water| 3 times/day  |
|                 | Punarnavadi Kwatha (Decoction)    | 20 ml    | -              | 2 times/day  |
|                 | Shivakshara Pachana Churna (Powder) | 5 grams | Luke warm water| 3 times/day  |
| 29/8/2013 to   | Gomutra (Cow urine)               | 50 ml    | Luke warm water| 1 time/day   |
| 5/9/2013        | Abhayadi Modaka (Tablet)          | 1 tab (125 mg) | Tap water | 1 time/day (Morning) |
|                 | Punarnava Mandura (Tablet)        | 500 mg   | Luke warm water| 2 times/day  |
|                 | Shivakshara Pachana Churna (Powder) | 5 grams | Luke warm water| 3 times/day  |
| 6/9/2013 to     | Abhayadi Modaka (Tablet)          | 1 tab (125 mg) | Tap water | 1 time/day (Morning) |
| 16-9-2013       | Sharapunkha Swarasa (Herbal juice) | 20 ml   | Luke warm water| 1 time/day   |
|                 | Punarnava Mandura (Tablet)        | 500 mg   | Luke warm water| 2 times/day  |
|                 | Arogyavardhini Vati (Tablet)      | 500 mg   | Luke warm water| 2 times/day  |
| 17/9/2013 to    | Sharapunkha Swarasa (Herbal juice) | 20 ml   | Luke warm water| 1 time/day   |
| 21/10/2013      | Erandahrishta Haritaki (Powder)   | 5 grams  | Luke warm water| 1 time/day (at night) |
|                 | Punarnava Mandura (Tablet)        | 500 mg   | Luke warm water| 2 times/day  |
|                 | Arogyavardhini Vati (Tablet)      | 500 mg   | Luke warm water| 2 times/day  |

Luke warm water had been used as on Anupana of given medicines

- No history of tuberculosis, diabetes mellitus, hypertension, hypothyroidism, any surgery or chronic illness.

**Family history**

- No evidence of this type of disease in the family.

**Physical examination**

- Bilateral pedal edema: +++
- Body temperature: 98.6 F
- Mild pallor
- Blood pressure: 126/70 mmHg
- Pulse: 86/min
- No icterus
- Respiratory rate: 20/min.

**Systematic examination (per abdomen)**

- Inspection: Distended abdomen
- Palpation: Hepatomegaly (2 cm below the right costal margin), splenomegaly, tenderness in the right and left hypochondriac region
- Percussion: Shifting dullness and fluid thrill: Present.

**Investigation**

Table 1 summarizes the blood profile and ultrasound investigations before and after treatment.

**Treatment**

Table 2 shows the treatment schedule of the patient.

**Pathya-Apathya**

Diet was restricted to the patient and she was kept on only cow milk (*Shunthi Siddha Godugdha*). All type of food items and water were restricted for 3 months. When the patient was hungry or thirsty, she was given lukewarm *Shunthi Siddha Godugdha* only. Medicines were also given with cow milk as an adjuvant.
Table 3: Relief in symptoms

| Date            | Anorexia | Vomiting after meal | Abdominal distension | Respiratory distress | Generalized weakness | Disturbed sleep | Bilateral pedal edema |
|-----------------|----------|---------------------|----------------------|----------------------|----------------------|----------------|-----------------------|
| August 22, 2013 | +++      | +++                 | +++                  | +++                  | +++                  | +++           | +++                   |
| August 27, 2013 | +        | +                   | +++                  | +++                  | +++                  | +++           | +++                   |
| September 1, 2013 | +       | +                   | +++                  | +++                  | +                    | +             | +++                   |
| September 6, 2013 | +       | -                   | +                    | +                    | +                    | +             | +++                   |
| September 11, 2013 | +     | -                   | +                    | +                    | +                    | +             | +++                   |
| September 16, 2013 | -     | +                   | +                    | +                    | +                    | +             | +++                   |
| September 23, 2013 | -     | -                   | +                    | +                    | +                    | +             | +                    |
| September 30, 2013 | -     | -                   | +                    | +                    | +                    | +             | +                    |
| October 7, 2013  | -       | -                   | +                    | -                    | -                    | -             | +                    |
| October 14, 2013 | -       | -                   | +                    | -                    | -                    | -             | +                    |

+: Indicates severity of complaints, -: Indicates absence of sign or symptoms.

Table 4: Measurement of abdominal girth

| Date            | 4 cm below umbilicus (cm) | At umbilicus (cm) | 4 cm above umbilicus (cm) |
|-----------------|---------------------------|-------------------|---------------------------|
| August 22, 2013 | 93                        | 90                | 86.5                      |
| August 27, 2013 | 92.5                      | 90.0              | 86.5                      |
| September 1, 2013 | 92.5                    | 88.5              | 85.0                      |
| September 6, 2013 | 91.0                    | 87.0              | 83.5                      |
| September 11, 2013 | 90.0                    | 86.0              | 82.0                      |
| September 16, 2013 | 88.0                    | 85.5              | 81.5                      |
| September 23, 2013 | 86.5                    | 83.5              | 79.0                      |
| September 30, 2013 | 85.0                    | 82.0              | 78.0                      |
| October 7, 2013 | 83.0                      | 82.0              | 78.0                      |
| October 14, 2013 | 83.0                      | 68.5              | 73.0                      |
| October 21, 2014 | 82.5                      | 81                | 73.0                      |

Table 5: Improvement in (Ubhay-pada Shotha) pedal edema

| Date            | Right (cm) | Left (cm) |
|-----------------|------------|-----------|
| September 22, 2013 | 38         | 37.0      |
| September 27, 2013 | 37         | 36.5      |
| September 1, 2013 | 37.5       | 36.5      |
| September 6, 2013 | 37         | 36.0      |
| September 11, 2013 | 36.5       | 35.5      |
| September 16, 2013 | 35         | 34.5      |
| September 23, 2013 | 33.5       | 33.5      |
| September 30, 2013 | 32         | 32.5      |
| October 7, 2013 | 30.5        | 31        |
| October 14, 2013 | 30          | 30.5      |
| October 21, 2013 | 30          | 30.5      |

Mid-point between knee joint and ankle joint

Results

Significant results were found in all the symptoms, abdominal girth and pedal edema [Tables 3-5].

Table 3 presents the relief in symptoms and Table 4 provides the measurement of abdominal girth and Table 5 shows the improvement in (Ubhay-Pada Shotha) pedal edema (mid-point between knee joint and ankle joint).

Discussion

Discussion on causes of ascites, Aacharya Charaka has mentioned many causes of Udararoga. In the present case, the patient had low digestive fire, over eating, very hot, salty, spicy, acidic food, taking dry and impure diet, negligence of the treatment of severe diseases and suppression of natural urges.[6]

Discussion on treatment of ascites[7]

Nidana Parivarjana (avoid causative factors)
For this diet and water, intake was restricted and the patient was kept only on milk diet.[8]

Agnidipti (provocation of digestion)
Mandagni is the chief factor in any type of Udararoga. For Agnidipti, Trikatu Churna (for 6 days) and Shivakashar Puchana churna (for 15 days) were given to the patient. It enhances Agni and helps in Samprapti Vighatana (breakdown of pathogenesis).

Apyam Doshaharanam and Sroto Shodhana (removing the accumulated fluid)
Gomutra[9] was given to the patient (15 days). Tikshna, Ushna Guna of Mutra (urine) enhances Agni (digestive power). By its Ushna (hot), Tikshna (sharp) and Ruksha (dry) Guna, it removes Strotosanga (obstruction) of channels and helps in Samprapti Vighatana (breakdown of pathogenesis). Simultaneously, there was removal of Apya Dosha (water retention) also.

Nitya Virechana (daily therapeutic purgation)
Chikitsa Sutra of Jalodara is “Nitya Virechana.” To break up the Sanga of all Dosha and retained fluid and separate them, Virechana is necessary. Liver (Yakrita) is the Mula Sthana (main site) of Rakta. Rakta-Pitta has Ashraya and Ashrayi Sambandha (mutual interdependence), hence for elimination of vitiated Pitta Dosha, purgation is the best treatment. Virechana also decreases abdominal girth and edema by decreasing fluid in the abdominal cavity.[10] Abhayadi Modaka[11] was given in present case for Virechana purpose. Daily 5–8 Vega were noted in patient after giving Abhayadi Modaka. More results were achieved in all the symptoms after starting daily therapeutic purgation.
Arogyavardhini Vati and Sarpunkha Swarasas
Arogyavardhini Vati is known for its benefits especially to the liver. Arogyavardhini maintains the liver function and promotes balance as well as a healthy digestive system. Its main content is Katuki (Picrorhiza kurroa Royle ex Benth.) which acts as Pitta Virechana and acts on Vata. [12,13] Ascites may be caused due to any pathology of liver, heart, kidney, etc., but ascites from liver disease is difficult to be treated; hence, there comes the need to correct the pathology from its root cause. In the present case, the patient also has hepatomegaly hence these drugs were administered. Sarpunkha is the drug of choice in spleen and liver diseases. It corrects the working of digestive system. It improves the functioning of liver. The study shows that Sarpunkha has hepatoprotective activity. [14]

Punarnavadi Kwatha and Punarnavadi Mandura
Punarnavadi Kwatha is indicated in the treatment of Udara Roga and it also reduces Shotha (swelling). It corrects Pandu and Shwasa too. The patient had all these symptoms with Jalodara, hence this Kwatha was prescribed which had shown significant result in all symptoms. Mandura is also indicated in Pandu (anemia), Shotha (oedema) and Shwasa (bronchial asthma) which significantly improved Pandu. [15,16]

Erandabhrishta Haritaki
This was given for Vatanulomana purpose. Apana Vayu is also included in Samprapti of Jalodara. Because of Erandabhrishta Haritaki, Apana Vayu moves toward its normal path and it helps countering pathology. It also possesses laxative effect.

Conclusion
Daily therapeutic purgation, diet restriction and Ayurvedic medicines had shown improvement in all the symptoms of Jalodara. In the present case, abdominal girth, pedal edema and all above-mentioned symptoms were significantly improved without any side effect. Although the patient was kept only on milk diet, no any side effects were noted during and after the treatment. In the present case, Arogyavardhini Vati was given for 45 days continuously, but no any side effects were noted; hence, it can also be concluded that metallic preparations are not harmful to the body if given in suitable dose, rather it gives more benefits. Hence, it can be concluded that Ayurvedic medicines with Nitya Virechana give better result in ascites without side effect.

Declaration of patient consent
The authors certify that they have obtained all appropriate patient consent forms. In the form the patient has given consent for her images and other clinical information to be reported in the journal. The patient understand that her name and initials will not be published and due efforts will be made to conceal her identity, but anonymity cannot be guaranteed.

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Conflicts of interest
There are no conflicts of interest.

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