Management of septic Arthritis through Ayurveda- A single case study

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Abstract:
Septic arthritis is a clinical emergency situation with significant risk factors especially with the case of delayed diagnosis. A 52 years female patient visited outdoor at Viswanath Ayurved Mahavidalaya & hospital, Kolkata with severe pain and swelling over right knee joint which was diagnosed as septic arthritis. She was shifted to indoor ward and was under Ayurvedic treatment that comprises of Maha Yogiraj guggul, Chandraprova vati, Chopchinyadi churna, Samir pannag ras, etc for about a month. The patient was recovered from her illness and symptoms after the completion of the treatment. A significant improvement occurs on overall swelling and redness and general well-being of the patient at the time of discharge. Management of emergency conditions like Septic arthritis through Ayurveda have immense potential.

Keywords: Ayurveda, Kroustuksirso, Septic arthritis, Vatakaphajasotha.
Introduction:
The incidence of septic arthritis is 2-3/100,000. [1] It is a clinical emergency situation with significant risk factors especially with the case of delayed diagnosis. Prompt intervention is the need of the time for preventing further functional complications of post-infectious joint destruction or, more seriously, septicaemia, multi organ failure, and even death. Septic arthritis is an inflammatory joint condition caused by a pus forming agent. The most common organism responsible for Joint infection in all age groups is Staphylococcus aureus.[2-5]
In Ayurveda the disease can be correlated to of Krostuksirso (Shiva munda). Ayurveda deals with 80 types of Vatavyadhi which is known as Nanatmaja Vatavyadhi. Kroustuk Sirso is one of such Nanatmaja Vatavyadhi which is characterized by profuse swelling and pain over knee joint. This condition may be correlated with the modern disease like Septic Arthritis or Synovitis.

There has been a phenomenal increase in the demand for specialized therapies of Ayurveda. Many of the treatment failure patients of the conventional system of medicine are coming to be treated at the different institutes of Ayurveda with a hope of recovery in this ancient system of medicine. The present single case study will throw light over the Ayurvedic management of clinical emergency condition like septic arthritis.

Case report:
A 52 years female patient visited the outdoor clinic on 6.3.19. Her chief complain at the time of visit was severe pain and swelling over right knee joint for one month with burning sensation and redness. Patient was diagnosed as Septic Arthritis after synovial Fluid culture showed Staphylococcus aureus by an orthopaedic surgeon. She had taken antibiotics but no significant result found after one month of that treatment. Then she had come to this Hospital at O.P.D. and advised to admit her. She was shifted from outdoor to indoor ward on the same day under advisement. In family history, no evidence of the type of disease was noted by patient in the family

Physical examination:
Anaemia: (+) ve, Icterus: (-) ve, Cyanosis: (-) ve, Clubbing: (-) ve , Edema: (++++) ve, CVS: S1 & S2 audible, Chest: B/L clear, Temp.: 100˚ F , B.P.: 130/90 mm of Hg, Pulse:88beats/min.

Table-1: Laboratory investigation:
<table>
<thead>
<tr>
<th>Investigations</th>
<th>Before Treatment</th>
<th>After treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>FBS</td>
<td>117</td>
<td>111</td>
</tr>
<tr>
<td>PPBS</td>
<td>196</td>
<td>146</td>
</tr>
<tr>
<td>HbA1C</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>TSH</td>
<td>6.7</td>
<td>5.7</td>
</tr>
<tr>
<td>CRP</td>
<td>20</td>
<td>05</td>
</tr>
<tr>
<td>CBC</td>
<td>Within normal range</td>
<td>Within normal range</td>
</tr>
<tr>
<td>LFT</td>
<td>Within normal range</td>
<td>Within normal range</td>
</tr>
</tbody>
</table>
LIPID PROFILE | Within normal range | Within normal range
---|---|---
Urea, Creatinine, Uric acid | Within normal range | Within normal range

**Treatment given:**

The patient was administered with Ayurvedic classical medicines mentioned in table 1. On 9.3.19 another medicine was added with the existing medicines. Patient was discharged on 10.04.2019 with the final diagnosis of *Krostusirso* (*Shiva munda*) with *Madhumeha* with *Vatakaphajasoath* (Septic Arthritis with DM2 with Hypothyroidism). With following medicines mentioned in table 1.

**Pathya-Apathya**

**Apathya:** Patient advised to avoid Chana (*Cicer sp.*), matar (*Lathyrus sp.*), badam (*Arachissp.*), curd, *Musa paradisiaca*, eggs, ladies finger, Urad dal (*Vigna sp.*).

**Table 1: Treatment given:**

<table>
<thead>
<tr>
<th>Date</th>
<th>Medicine</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>06.03.19</td>
<td><strong>Tab Chandraprova vati 125mg</strong></td>
<td>2 Tab BDPC (two times a day after meal) with plain water</td>
</tr>
<tr>
<td></td>
<td><strong>Tab Maha Yograj guggulu 500mg</strong></td>
<td>2 Tab BDPC (two times a day after meal) with plain water</td>
</tr>
<tr>
<td></td>
<td><strong>Chopchinyadi churna</strong></td>
<td>125 mg BD (two times a day) with pinch of butter</td>
</tr>
<tr>
<td></td>
<td><strong>Samir pannag ras</strong></td>
<td>500 mg two times with a cup of milk</td>
</tr>
<tr>
<td></td>
<td><strong>Dasamoolyavkwath decoction</strong></td>
<td><strong>Swedana</strong></td>
</tr>
<tr>
<td>9.3.19</td>
<td><strong>Vidanga churna</strong></td>
<td>1 tablespoon at bed time with luke warm water</td>
</tr>
<tr>
<td>10.4.19</td>
<td><strong>Vidanga churna</strong></td>
<td>1 tablespoon at bed time with luke warm water</td>
</tr>
<tr>
<td></td>
<td><strong>YogirajGuggulu -500mg</strong></td>
<td>2 Tab BDPC (two times a day after meal) with plain water</td>
</tr>
</tbody>
</table>
Clinical images:

Fig-1: Before treatment (6.3.19)  
Fig-2: During treatment (18.3.19)  
Fig-3: During treatment (30.3.19)  
Fig-4: After treatment (10.4.19)  

Result and Discussion:
A significant improvement occurs on overall swelling and redness and general wellbeing of the patient at the time of discharge. After the discharge on a follow up visit the patient was almost recovered from the symptoms [Clinical images]
The Ayurvedic pathogenesis of Kroustuk Sirsa (Septic Arthritis or Synovitis) is an accumulation of Dusta Rakta in the knee joint being provoked by aggravated Vayu. In this condition the RaktaVaha Shrotas being obstructed by Kapha which comes through the malfunctioning of the aggravated Vayu.[6] So in this event as knee joint is the place of Slesmak Kapha but aggravated Vayu insisted it to make obstruction of circulated blood within the joint space, so the lower portion of knee joint as well as lower portion of thigh above the knee joint become dried up or atrophied and the structure becomes swelled as an head of the Jackal and is called Shiva Munda or Kroustuk Sirsa. In this condition an active inflammatory pathological state comes around which may be called as Pradaha.
The Raktasodhak Dravyas are known to Pittasamak means Pradahsnasak so the line of management should be as like as Vatarakta of Ayurveda. The pacification of Vayu and purification of Rakta Dhatu is the basic aim towards Samprapti vighatan (Prakriti Sthapan) by clearing the channel (Sroto Sodhan) to reduce Avarana (covering or obstruction). As Rakta Dhatu bears the character of Pitta so there is redness, warm and as aggravated Vayu causes Shoola (pain) so by introducing some Rakta Sodhak Oushodhi as well as Vata Samak Oushodhi the treatment should be planned.

Though classically Kroustuk Sirsa is treated as per the principal of Vata Rakta and Rakta Mokshana (blood-letting), Sira Vyadh (Puncturing the vessels) are done yet in present study only Samsoman therapy has been introduced where Samir Pannag Ras 500mg twice daily has been used to reduce Shoola (pain) by pacifying Vata and clearing the channel (SrotoSodhan). Maha Yograj Guggul 500mg twice daily works as Sroto Sodhak and Pradaha Nashak (Anti-inflammation), Chandra Prabha vati 2 tablets twice daily acts to rejuvenate the joint structures and to reduce the swelling. Chopchunyadi churna 125mg twice daily with butter causes Deepan (metabolic activator) and kriminasak (antimicrobial), Dasamul Kwath works as Vata Samak (reduces pain) and sothanasak (anti-inflammatory, Vidanga Churna acts as Kriminashak (antimicrobial).

These above mentioned treatment protocols are said to be potent Vata Samak, Rakta Sodhak or Pitta Samak as well as Sroto Sodhak agents additionally effect on some other ingredients as Rasayan (nutritive), Deepan (metabolic corrective) and Kriminashak (anti-microbial). Those medicines became able to give relief in one month span to the patients who has attended OPD on 06/03/2019 with the features of Acute Septic Arthritis like severe pain and swelling over knee joint and having the body temperature 100” F.

Conclusion:
From this case study it could be concluded that septic Arthritis or Acute Synovitis may be correlated with the Ayurvedic ailment KroustukSirsa or Shiva Munda. Chandraprabha vati, Maha Yograj Guggul, Chopchinydi Churna, Samir Pannag Ras, Dashamul Kwath and Vidanga Churna are the treatment protocol for the treatment of Kroustuk Sirsa.No such adverse effect observed during the course of treatment in this patient.

Limitation of study:
For the management of clinical emergency situation like the case of septic arthritis, though Ayurved has immense potential, more practical implementation is needed for having adequate scientific and clinical database.

Declaration of patient consent:
The authors certify that they have obtained all appropriate patient consent forms. In the form the patient has given her 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.
References:


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