

TREATMENT OF OSTEOMYELITIS WITH ARKA KSHEER**Dr. Kumari Seema¹ and Dr. Rajeev Kumar*²**¹PG Scholar, Dept. of Shalya, Gurukul Parisar, Haridwar, UAU, Uttarakhand.²Assistant Professor, Dept. of Shalya, Gurukul Parisar, Haridwar, UAU, Uttarakhand.Article Received on
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Corresponding Author*Dr. Rajeev Kumar**Assistant Professor, Dept. of
Shalya, Gurukul Parisar,
Haridwar, UAU, Uttarakhand.**ABSTRACT**

Osteomyelitis is an infection of bone or bone marrow caused by different types of bacteria. most commonly it is found in children. Patient presents with fever, pain and swelling at the end of the bone, redness and hotness localized to metaphyseal area of the bone. Nowadays the treatment for osteomyelitis mainly focus on the long term antibiotic therapy and surgical management by bone graft or by debriding the wound which is a prolonged and frustrating course of management. Arka (*calotropis procera*) an ayurvedic plant which has been used traditionally to treat a variety of diseases. Its latex contains powerful active substances which can be used to treat osteomyelitis.

KEYWORDS: Metaphyseal, *calotropis procera*.**INTRODUCTION**

It is an inflammation of bone, localized or generalized due to infection, usually by pyogenic organism. Infection reaches bone either by blood i.e. by haematogenous origin or due to external trauma to the bone. On the basis of duration of infection, the pyogenic infection of the bone can be classified into two types.

- 1) Acute and
- 2) Chronic osteomyelitis.

Acute osteomyelitis

It is most common type of osteomyelitis often seen in children. It is further divided into two types based on the type of spread of infection

- Primary- due to haematogenous spread.
- Secondary –which occurs after trauma or operation

Chronic osteomyelitis- Acute osteomyelitis commonly leads to chronic osteomyelitis because of the following

- Delayed or inadequate treatment
- Reduced host resistance.

According to Ayurveda Acharya Sushruta has mentioned osteomyelitis in Nidana Sthana, ninth chapter named Vidradhinidana, Vidradhi is caused by vitiation of rakta which produces severe burning sensation i.e. Vidaha so it is called as Vidradhi. Asthi Vidhradhi is caused all together by three Doshas and it is very painful. When Vidradhi reaches the Asthi Naal (medullary cavity) and left untreated, there occurs severe suppuration due to which patient suffers from severe burning sensation later when pus finds its way of coming outside through skin it discharges slimy, white, cold and heavy discharge.

It mainly occurs due to 2 factors

- 1) Nija –cause lies within the body.
- 2) Aganthuj –cause lies outside the body.

Anyone of the factor leads to Vaigunyam of Asthi Dhatvagni formation or we can say mal-bone formation which later leads to Dhatu Paka (destruction), so a treatment is needed which can control Dhatupaka and maintain proper Asthi Dhatvagni and this can be achieved either by external application of an anti-oxidant herbal formulation i.e. Arka Ksheer and increase immunity by special internal medicines.

Aetiopathogenesis: The commonest organism causing infection is staphylococcus followed by streptococcus and pneumococcal, all of them affect bone through blood circulation. Bacteria travel along the bone and gets lodged in the metaphysis as it is highly vascular due to which the bone initiates an inflammatory reaction in response to the bacteria which destroys bone and produces pus cells.

- 1) The pus formed spreads in the medullary cavity and following direction due to which thrombosis of venous and arterial medullary vessels occurs and supply to a segment of bone is cut off.
- 2) Out of the cortex – It damages the peri-osteal blood supply to a part of the bone leading to sinus.
- 3) In joints leading to acute pyogenic arthritis.

Signs and Symptoms

A number of times there is no signs or symptoms or sometimes it is difficult to differentiate it from other problems, following are the common signs and Symptoms of osteomyelitis:-

- Fever, malaise, chills
- Swelling, warmth and redness over the area of the infection
- Pain in the area of the infection
- Fatigue.

Diagnosis

Diagnosis is made clinically it mainly affect male children and they are more prone to injury. The child present with pain and swelling at the end of the bone, fever, a history of previous injury or a primary focus of infection may be present somewhere in body like(tonsils, skin).

On examination: signs of inflammation like redness, heat, swelling, pain is present on the affected part of the bone, this inflammation if left untreated may get converted into an abscess followed by sinus formation.

Investigations

- **Blood:** Increased ESR.

Blood culture when fever is at its peak to rule out the causative organism.

- **X-rays:** initially i.e after 7to 10 days of infection the X-rays show periosteal new bone deposition at metaphysis.
- **Bone scan:** it shows positive changes before they appear on X-ray, it can be used for early diagnosis of infection.
- **Aspiration of bone:** A thick needle is used to aspirate pus from the bone.

Differential Diagnosis

In an infant any inflammatory disease of the bone should be first considered as osteomyelitis unless other disease is proved. Differential diagnosis should be done with

- Acute septic arthritis
- Acute rheumatic arthritis
- Scurvy
- Acute poliomyelitis.

Management

Osteomyelitis is managed with the help of antibiotics therapy and sometimes requires surgical intervention i.e. by removal of infection and necrotic tissue. In absence of pus culture broad spectrum antibiotics should be started.

Management of Osteomyelitis By Arka Ksheer**Probable mode of action**

According to Rasatarangini Arka Ksheer Tikta in Rasa, Snigdha and Ushna in Guna. Tikta Rasa is Vishaghna, Krimighna and Twakmasyao-Sthirikarno as per view of Charak, mentioned in Sutrasthana 26. Vishaghana and Krimighna Guna of Arka Ksheer helps to enhance the immunity and prevents osteomyelitis patient for the further infection.

- By Guna Twakmasyao –Sthirikarno Ksheer helps to restore the original condition of skin and provide cosmetic stability to the patient.
- Also Tikta Rasa is Jwaraghno, so fever and irritability of osteomyelitis patient can be overcome by using it.
- Arka is Vatahrat, which means it balances the Vata. We all know that Vata has Ashrya-Ashriya Bhav with Asthi and Asthi is one among Vata Sthana. There is no pain in absence of Vata hence application of Arka Ksheer suppress the pain in osteomyelitis being Vatahrat and Ushna Virya, Vednashamak.
- Being Ushna Virya it also suppresses Kapha Dosha, which is the main reason for causing pus discharge hence it can be overcome by using Arka Ksheer
- Arka Ksheer has good result in skin diseases, so can be given for cosmetic purposes at last stage of healing to restore the original color of skin.

DISCUSSION

Osteomyelitis is an asthi dhatu disorder, asthi dhatu has direct relation with vata dosha i.e. any alteration of vata dosha affects asthi dhantu impairment and remains normal when the level of vata dosha is normal in body. Nija type of osteomyelitis is caused by mithya ahara vihara so its first line of treatment is Nidana Parivarjan and the agantuj type of osteomyelitis is caused by trauma which can be taken care of. Symptoms of osteomyelitis like swelling, inflammation, induration, pain, pus discharge can be treated symptomatically with the application of arka latex which has property of Vedanasthapana Shothahara, Vranashodhana, Kusthagna, Jantughna, Deepan, Pachana, Raktashodhan karma.

CONCLUSION

Osteomyelitis is a common condition but difficult to cure, it is notorious for its recurrence and it has the possibility to get converted into malignant condition. the available modern treatment is not much satisfactory and has a lot of adverse effects hence arka ksheer can be the best cost effective treatment for osteomyelitis.

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