A Case of Sternocleidomastoid Tropical Pyomyositis In Southern India Case Report And Literature Review

Nithin Prakasan Nair* Natarajan Ramalingam, Arun Alexander*****

* Junior Resident, ** Senior Resident, *** Additional Professor And Head, Department Of ENT, Jawaharlal Institute Of Post Graduate Medical Education And Research, Pondicherry, India

Abstract: Pyomyositis of Sternocleidomastoid or in the neck is one of the rarest conditions, which is bacterial in origin. Here, we are reporting a patient of tropical sternocleidomastoid pyomyositis who presented to our centre, which was managed successfully. A High index of suspicion is required for early diagnosis as the disease is rare. Prompt treatment by incision and drainage will prevent the occurrence of complications like IJV thrombosis and septicemia. [Nithin N SEAJCRR 2017; 6(1):23-25]

Key Words: Tropical; Pyomyositis; IJV thrombosis

Author for correspondence: Natarajan Ramalingam, Senior Resident, Department of ENT, Jawaharlal Institute of Post Graduate Medical Education And Research, Pondicherry, India. E-Mail: rnattu8906@gmail.com M: 9442033895

Introduction: Pyomyositis or pyogenic myositis of Sternocleidomastoid or in the neck is rarely described in the literature. It is generally bacterial infection of muscles which is usually seen in tropical areas. Here we are reporting a case of pyomyositis of Sternocleidomastoid in an immunocompetent patient.

Case Report: 41-year- old lady presented to our tertiary care centre in southern India, with complaints of swelling over the left side neck for 1 month, which was insidious in onset and progressive in nature. The swelling was associated with low-grade fever, which was relieved with medications. The Patient also complained of pain associated with swelling during swallowing and neck movements. There was no history of trauma prior to the onset of swelling, contact with tuberculosis or past history of tuberculosis. Patient was not a known case of diabetes mellitus or hypertension. There was no previous history of similar swelling in past. There was no history of dysphagia, dyspnea or change in voice. There was no history suggestive of hyperthyroidism or hypothyroidism. There was no history of an increase in the size of swelling along with intake of meals. The Patient didn't have any nasal/ throat or ear complaints. There were no complaints of toothache or any other complaints pointing to any foci of infection.

On clinical examination, the patient was afebrile with stable vitals. Local examination of the neck revealed a swelling of 3x 2cm over left side upper neck [Fig 1], over the left Sternocleidomastoid which was soft and fluctuant. Local rise of temperature and tenderness was present. On ultrasound examination, a 3.3x2cm ill-defined, heterogeneously hyperechoic focal area noted over left side upper Sternocleidomastoid. Left side Internal Jugular Vein appeared compressed. Few neck nodes were seen over left side neck level II, the largest being 5mm. Left side submandibular gland and parotid gland appeared normal.

Incision and drainage was done under local anesthesia, around 5 ml of pus was aspirated and send for culture. Wound dressing was done daily. Pus culture sensitivity was reported as Group A streptococci which was sensitive to penicillin and oxacillin. The patient was started on cloxacillin, Gentamicin and Metronidazole and was given for 5 days.

Total and Differential counts and peripheral smear were reported as to have neutrophilic leucocytosis. ESR was elevated (78 mm/hr). Absolute Eosinophil count was not increased ruling out allergy and parasitic infections. Blood sugars, electrolytes and renal function were also reported as normal. Acid Fast Bacilli stain of pus was reported as negative. Chest X - ray [Fig 2] and Mantoux were also reported as normal ruling out foci of Pulmonary or extra pulmonary Tuberculosis. Also, Fine Needle Aspiration cytology revealed a paucicellular smear with spindle cells resembling fibroblasts with no evidence of granuloma formation. Biopsy confirmed the diagnosis of myositis.

Repeat ultrasound revealed no evidence of collection with a normal internal jugular vein. Wound was closed in one layer with 3-0 silk on day 5. The patient was discharged on Day 6 on oral antibiotics. On further follow-up, wound appeared healthy and the patient was asymptomatic.

Fig 1: Picture of the patient with arrow mark showing the site of swelling

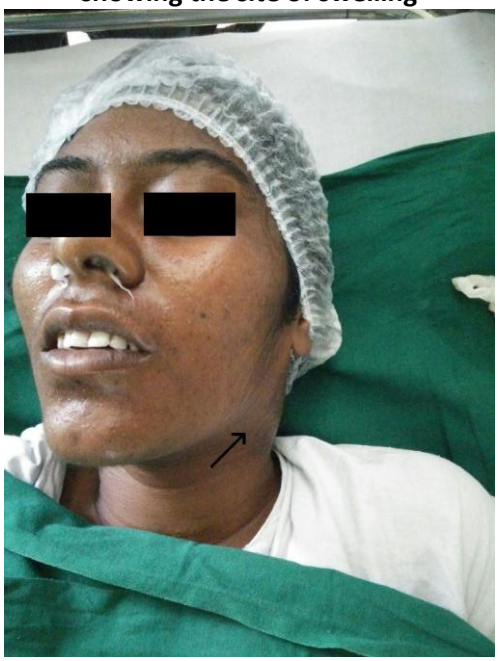
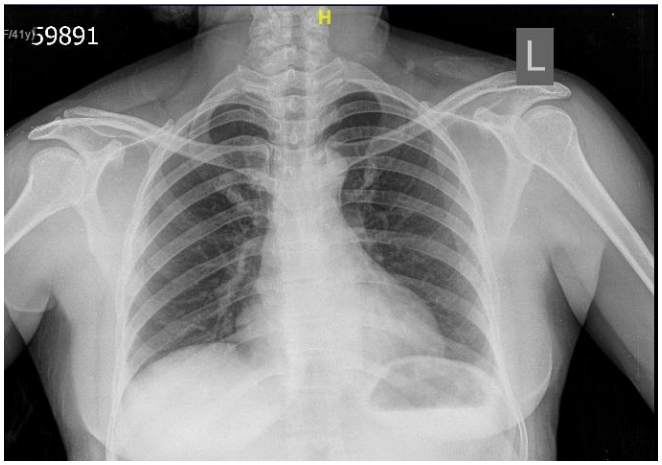


Fig 2: Picture showing the Chest X ray of the patient which was normal



Discussion: Tropical pyomyositis is primarily a striated muscle infection seen mainly in tropical areas. [1] Of late these cases have been reported from temperate areas as well. [2] Though the clinical picture is same in cases from tropical and temperate areas, there are certain basic differences between these two. Cases occurring in temperate regions tend to occur in the elderly age group with co-morbidities like HIV, Diabetes etc. [3,4] Whereas those occurring in tropical regions occur in children and middle age group in immuno competent patients. [3, 4] Trauma has been described as a cause for pyomyositis in the tropical region. [1] The most common organism in both regions is Staphylococcus aureus (around 90%). [1] Group A Streptococcus accounts for 5% of the cases. [2] Other organisms are Streptococcus (groups B, C, G), Pneumococcus, Neisseria, Haemophilus, Aeromonas, Serratia, Yersinia, Pseudomonas, Klebsiella, and Escherichia. [2]

Normal skeletal muscle is practically resistant to bacteremia as iron is sequestered in myoglobulin thereby becoming unavailable to bacteria for growth. [1, 5] It has been postulated that damaged muscle fibers secondary to trauma and secondary infection can result in bacteremia. [1] Vigorous exercise has been postulated to be a cause of tropical myositis. [6] Other mechanisms include viral and parasitic infections. [1, 7]

Our patient falls into middle age group from a tropical region and did not have any co-morbidity as the blood sugars were within normal limits and serology examinations for HIV, HBsAg and HCV was found to be negative. Work up for Tuberculosis was also done, which was found to be negative. The patient was not on any immunosuppressant drugs. There was no history of trauma in this patient. This fits the description of tropical myositis in literature. [3]

Though pyomyositis is seen typically in lower extremities other muscle groups such as iliac, trunk, neck and upper extremities have been reported. [3] In our case, the pyomyositis was seen in the cervical muscle group.

Klabacha et al, in 1982 advised a four-tiered classification for diagnosis of pyomyositis. When infections are limited within the epidermis and subcutaneous lymphatic system, it is considered to be Type I, whereas, in Type II there is involvement of the epidermis and subcutaneous lymphatic system. Infection involving fascial planes is considered as Type III and deeper tissue with myonecrosis, Type IV. [8] Pyomyositis generally progress through three stages. In stage one, there is diffuse muscle infection characterized by pain and low- grade fever. In the second stage, there is abscess formation associated with high fever, restricted muscle movement and edema. Stage three is characterized by systemic manifestations like high fever, severe pain and sepsis. [1]

Imaging studies in the form of ultrasonography, Computed tomography is required for clinching the diagnosis in suspected polymyositis. Definitive

diagnosis is made by histopathological assessment of the affected muscle specimen.

Our patient presented to us in stage IV with myonecrosis as evidenced by abscess formation. Pyomyositis of Sternocleidomastoid muscle should be treated with care as it may lead to internal jugular Vein (IJV) thrombosis when it progresses to third stage. [9] In our case, though the IJV was only compressed there was no evidence of thrombosis by ultrasonography. As the patient had abscess formation, timely intervention prevented its progression to thrombosis.

The importance of tropical myositis lies in the early diagnosis and immediate treatment. Early diagnosis requires a high index of suspicion on part of the clinician as the disease is rare in this part of the country. To the best of our knowledge, only one patient with sternocleidomastoid pyomyositis has been reported from Southern India, [10] though there are many reports from northern part of India. This reiterates the need for high index of suspicion required for early diagnosis as the disease is rare. Prompt treatment by incision and drainage will prevent occurrence of complications like IJV thrombosis and septicemia.

Conclusion: Cervical pyomyositis is one of the rare conditions, which has to be treated empirically with antibiotics and incision and drainage. It is rare in immune competent patients, but if diagnosed, such patients should be evaluated for immune compromised conditions. A high index of suspicion required for early diagnosis.

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