CASE REPORT

A RARE PRESENTATION OF PRIMARY CLAVICLE OSTEOMYELITIS IN CHILDREN: SUBLUXATION OF STERNOCLAVICULAR JOINT AND EXPOSED MEDIAL END OF CLAVICLE

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ABSTRACT: Osteomyelitis of clavicle is an uncommon disease. In children its origin is generally haematogenous and in adults it is more commonly a secondary infection seen in association with predisposing factor. We are reporting a case of clavicle osteomyelitis in an 8 year female child. Patient presented with us with exposed medial 1/3rd of clavicle with subluxated sternoclavicular joint with abscess around the clavicle. X ray was predominantly sclerotic. Patient was managed by excision of projected medial end of clavicle and I/v antibiotic. Excised fragment sent for histopathological examination confirmed the diagnosis of chronic osteomyelitis. Postoperatively patient achieved normal range of movements of involved upper limb. Primary osteomyelitis of clavicle is very rare disease. The radiographic findings in clavicular osteomyelitis are frequently not diagnostic and histopathological examination of the diseased bone is usually required to confirm the diagnosis. The management includes both medical and surgical strategies. A large part of the clavicle can be excised without significant loss of function.

KEYWORDS: Clavicle, Osteomyelitis, Sternoclavicular joint, Excision.

INTRODUCTION: Osteomyelitis of clavicle is an uncommon disease. In children its origin is generally haematogenous and in adults it is more commonly a secondary infection.⁽¹⁾ Despite modern surgical technique and advanced antibiotic therapy, osteomyelitis remains a difficult and challenging problem.

CASE REPORT: An 8 year female child presented to us with exposed medial 1/3rd of clavicle with subluxated sterno-clavicular joint. There was history of swelling around medial half of clavicle 3 month back which was associated with high grade fever. Patient was initially treated by local practitioner by some oral medicines. After which symptoms slightly got better but gradually patient developed ulcer over the clavicle along with pus discharge. Clinical examination revealed an ulcerative lesion (5x2x2 cm) on medial third of right clavicle with irregular margins. Medial 1/3rd of clavicle was protruding out and there was foul smelling discharge.

There was no evidence of anterior cervical or axillary lymphadenopathy. Radiological evaluation of right shoulder and clavicle demonstrated subluxation of sterno-clavicular joint. Medial half of clavicle was broadened and sclerotic. Culture of pus discharge revealed growth of *Staphylococcus aureus*. Patient was managed by excision of projected medial end of clavicle. Bone along with excised tissue was sent for biopsy. Histopathological report confirmed chronic osteomyelitis. Post operatively patient was kept on intravenous antibiotics. Patient was discharged on 11th post operative day on oral antibiotics. Sinus healed in follow-up period. Patient achieved normal range of movement in right shoulder with no weakness.

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DISCUSSION: Non traumatic lesions of the clavicle are rare. According to Franklin et al, 37.5% of non-traumatic clavicular lesions are neoplasms, another 37.5% are infections and remaining 25 % represent developmental anomalies.⁽²⁾ Medial half of clavicle is preferred site of osteomyelitis.⁽¹⁾ Osteomyelitis of clavicle is a rare condition. Primary osteomyelitis of clavicle usually occurs in children. The infection is diaphyseal and caused by haematogenous spread. Staphylococcus aureus is most common causative organism. However anaerobic and mixed infections are also common.⁽³⁾

Osteomyelitis in adults is usually secondary infections. This can occur as complications of head and neck surgery or subclavian vein catheterization.⁽⁴⁾ Osteomyelitis is a process of devascularisation of the periosteal and endosteal arterial system of bone secondary to increased intra-osseous pressure, the thrombophlebitis and bone infection itself. If diagnosis and adequate treatment not started early, it results in necrosis of bone. Necrosis of large fragment lead to formation of sequestrum.⁽⁴⁾

Osteomyelitis of the clavicle can resemble a neoplastic process on radiograph; hence a biopsy may be necessary to confirm diagnosis.⁽⁵⁾ Ewing's sarcoma should always be considered when children present with local pain, swelling, fever & leukocytosis because of its prevalence in children.⁽¹⁾

Radiological finding of acute or subacute osteomyelitis include soft tissue swelling, periosteal reaction, cortical irregularity and demineralization. In chronic osteomyelitis there may be thick irregular bone, sclerotic bone interspersed with radiolucencies and elevated periosteum.⁽⁴⁾

Despite modern surgical technique and advanced antimicrobial therapy, osteomyelitis remains difficult and challenging problem. Wide surgical debridement is mainstay of the treatment in the chronic conditions. A large part of the clavicle can be excised without loss of function.^(6, 7)

CONCLUSION: The primary osteomyelitis of clavicle is a rare. It should be differentiated from neoplasms like Ewing's sarcoma specially in children. Surgical excision of involved portion of clavicle along with antibiotic therapy is the mainstay of treatment. This surgical excision of a portion of clavicle does not affect the functional status of shoulder girdle.

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Clinical picture

Follow up photograph

X-RAY

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