Tuberculosis of the Sternoclavicular Joint: Report of Three cases

Ajay Kumar Jha[1], AC Jha[2], Nibedita Mishra[2]

Abstract

Tuberculosis is seen in every part of the body, but sternoclavicular joint tuberculosis is rare. The sternoclavicular joint (SCJ) is a saddle type of synovial joint and it accounts for only 0.5 - 1% of all cases of peripheral tuberculous arthritis and is more often infected by pyogenic organisms than by the tubercle bacillus.

The pathogenesis of sternoclavicular joint infection is not fully understood but appears to be haematogenous caused by infected scalene lymph node or directly from reactivated apical pulmonary focus.

Discussion

We report three cases of sternoclavicular joint tuberculosis, in a 49-years-old man (1st) and a 45-years-old woman (2nd), both were hypertensive and diabetic and one 36 years old female (3rd) without risk factors. Swelling of the SCJ, low grade febrile illness and loss of weight were the presenting manifestation. In first case left SCJ was affected and in last two cases right SCJ were affected. Laboratory tests indicated inflammation in all three of the patients. The intradermal tuberculin test were strongly positive in all three patients, whereas smears and cultures of sputum and urine samples were negative for the tubercle bacillus.Serologic tests for the human immunodeficiency virus were negative. Contrast enhanced computed tomography (CECT) of thorax showed inflammatory lesion involving left SCJ with extension to mediastinum in 1st case. In 2nd case it showed cold abscess of right SCJ and in 3rd case necrotic soft tissue swelling of right SCJ. FNAC of a specimen confirmed the diagnosis in 2nd case (Figure 1). The outcome was favorable after treatment with anti-tubercular drug for nine months in first two cases. Third case still undergoing treatment. 3rd case after discharge developed severe backache for which MRI thoracolumbar spine was done which showed as Pott's spine at D6-D8 level.So her revised diagnosis was disseminated Koch's (Dorsal spine and right SCJ).

Tuberculosis of the sternoclavicular joint is rare and can raise diagnostic problems. The diagnosis should be considered in every patient with arthritis in a sternoclavicular joint or unexplained pain in a shoulder. Complications include migration of tuberculous abscesses to the mediastinum and compression or erosion of the large blood vessels at the base of the neck.

Demonstration of acid-fast bacilli, which is the gold standard for diagnosis, is extremely rare in these lesions. Diagnosis is usually based on demonstration of granulomas on histopathology.

Conclusion

Despite the availability of advanced diagnostic facilities, TB of the sternoclavicular joint often raises diagnostic problems. It invariably lead to a delay in treatment which may raise the incidence of morbidity and mortality. So early diagnosis is essential for a good outcome. A high index of suspicion is mandatory. Poor response to antibiotic therapy leads to suspicion of underlying TB and relevant investigations should be carried out.

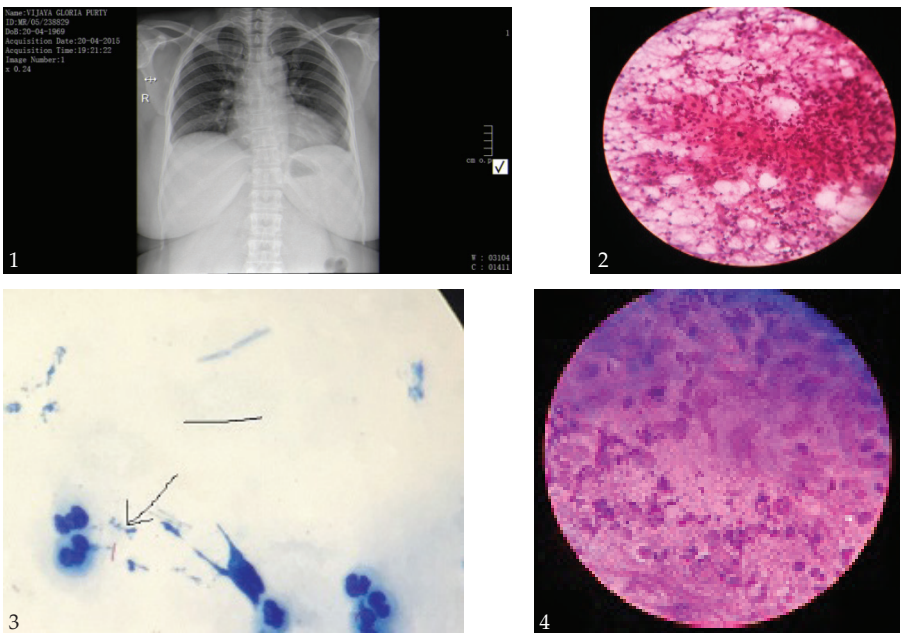

Fig. 1: 2nd case : (1) X-ray chest PA view- normal study (2) FNAC smear of SCJ showing Granuloma (X10) (3) ZN stain of SCJ aspirate showing acid fast bacillus (4) Epitheloid cells (X 40)

References

1. Kurtz B, Hauss PA, Druesne L, Chassagne P. Tuberculosis Arthritis of the Sternoclavicular Joint. *Revue de Medecine Interne* 2005; 26:249-245.
2. Enarson DJ, Fujii M, Nakielna EM, Grzybowsky S. Bone and Joint Tuberculosis: A Continuing Problem. *Canadian Medical Association Journal* 1979; 120:139-145.
3. Pertuiset E. Peripheral Bone and Joint Tuberculosis. Encyclopedie Medicochirurgical-Rhumatologie 2004.
4. Tuli SM. Tuberculosis of the Skeletal System (Bone, Joints, Spine and Bursal Sheaths). Jaypee Brothers Medi- cal Publisher, New Delhi. 1993.
5. Ankit S, Jyotirmoy P, Partho SK, Nirodh BD. Tuberculosis of Sternoclavicular Joint-Uncommon Ma- nifestation of a Common Disease. *Journal of Medicine* 2010; 11:102-104.
6. Watts HG, Lifeso RM. Tuberculosis of Bones and Joints. *The Journal of Bone Joint Surgery American* 1996; 78:288-298.

[1]Specialist, [2]Senior Specialist, Tata Main Hospital, Jamshedpur, Jharkhand

Received: 16.02.2017; Accepted: 23.07.2018