

A Rare Case of Tabetic Arthropathy Knee Treated with Ilizarov's Technique

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Abstract: We present a case of tabetic arthropathy of left knee which was presented to the department as a case of repetitive knee effusion. After thorough investigation and planning, we have tried arthrodesis with ilizarov's technique. In spite of efforts from our side the joint is showing signs of non union. This case is presented to highlight the dilemma associated with treatment of neuropathic joint by arthrodesis by ilizarov's technique

Keywords: Tabetic Arthropathy, Arthrodesis, Ilizarov's technique, Knee joint, Non Union

1. Introduction

A neuropathic joint is one associated with central or peripheral nerve lesions and characterized pathologically by rapid exudation into the joint cavity and periarticular structures, disorganization of the articular and surrounding structures, pronounced new bone formation and elongation of supportive structures. It is clinically by painlessness and abnormal mobility [1], [2].

Mitchell first reported the association of bizarre joint changes with spinal cord diseases. Charcot defined neuropathic joint associated with tabes dorsalis [3], [4].

Tabes dorsalis is one of the common disease causing neuropathic joint. The morbidity and economic burden caused by this disease is not negotiable, hence a definitive and cost effective treatment protocol is the need of time. As per the existing studies, arthrodesis is a cost effective and the better method than total knee replacement [5].

2. Case Report

Apparently normal lorry driver presented with complaints of a swelling on back of knee in December 2012 which was slowly increasing in size. In almost 6 months time, the swelling extended to the whole leg and he had difficulty in walking but no pain. Patient had history of pain in knee which was exaggerated while walking, later pain subsided but swelling continued to increase. By the end of December 2013, the patient sought medical advice at Imphal hospital, where amputation was suggested. He went to Shija clinic and knee aspiration was done. Swelling subsided and the patient was able to walk with support for around a month. However, similar swelling developed again. Abnormal sound from knee was also manifested. At this stage, he consulted the OPD at RIMS, Imphal. Patient was admitted and thorough check up was done. VDRL came positive and syphilis was confirmed by FTA-ABS. X-ray and CT- scan was suggestive of tabetic arthropathy. Patient was planned for arthrodesis of left knee by Ilizarov's technique was conducted on 01/07/14.

Synovectomy showed features s/o chronic synovitis. In routine follow up by 6 months, patient's knee swelling had decreased. By 12 months follow up x-ray showed signs of non union and clinically there was no sign of union.



Figure 1: clinical preoperative photograph showing swelling and folding of skin and post operative photograph on right

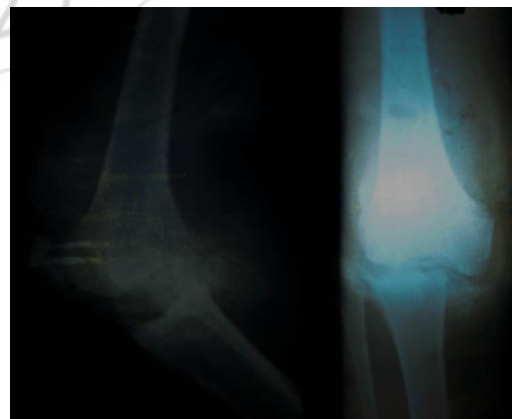


Figure 2: Preoperative lateral and AP view of left knee

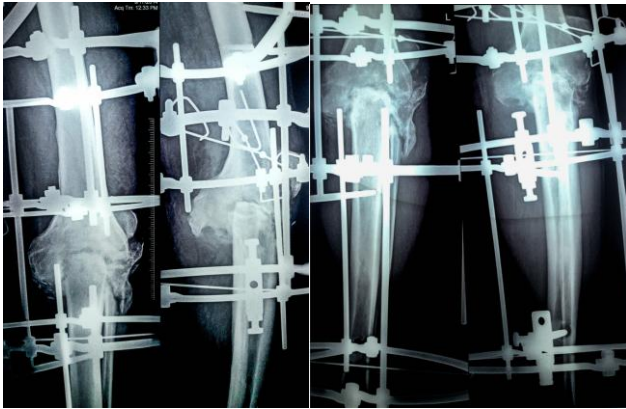


Figure 3: post operative AP and Lateral views at 6 months and 12 months

3. Discussion

In this modern era, tabetic arthropathy is not so common in developed and developing countries, but cases are reported in non developed and a few developing countries. In spite of the improvements in orthopaedic science, the treatment of tabetic arthropathy and other neuropathies are still controversial. It has been suggested in the existing studies that, as a general principle, arthrodesis is better than total knee replacement because of multiple incidences of failures by conventional technique [6]. The studies also point out that certain basic principles have to be followed while conducting arthrodesis:

- 1) Soft tissue management and protection is critical. Dissection is performed with minimal zone of tissue spreading. Retraction of tissues must not compromise local blood flow or traumatize the skin. Skin bridges must be broad and thick to avoid devitalisation
- 2) Careful removal of all cartilage and debris and hypertrophic synovium
- 3) Thorough removal of sclerotic bone down to bleeding until well vascularised bone is reached
- 4) Meticulous fashioning of congruent bone surfaces for opposition
- 5) Firm fixation of bones by intramedullary devices or external fixation [7].

4. Conclusion

In the light of this case study, we can't suggest it as a better modality than arthrodesis by Charnley's compression apparatus or intramedullary nailing, but we have to confirm the above findings by metaanalysis of other case reports also.

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Author Profile



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