

Outcome Of Primary One-Stage Total Hip Arthroplasty For Patients With Tuberculosis Of The Hip

Orthopaedics / Pelvis, Hip & Femur / Joint Replacement - Primary

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Background

The incidence of osteoarticular tuberculosis (TB) in western countries is rising as a result of an increase in immigration from regions where TB is endemic, an increase in the number of people with immune suppression, an ageing population and the development of drug resistant strains of *Mycobacterium tuberculosis*. TB of the hip constitutes approximately 15% of all cases of osteoarticular TB and is the most frequent site of bone involvement after the spine. Patients with a history of (TB) of the hip frequently develop secondary osteoarthritis (OA). These patients present a challenge for having joint replacement because of abnormal bone development, the possibility of re-infection, soft tissue problems and their life-style (more active than patients with old age arthritis).

Objectives

The aim of this study was to assess the outcome of total hip arthroplasty (THA) done for post tubercular hip arthritis. On the basis of previous literature, our hypothesis was that THA in these patients is a safe procedure providing symptomatic relief and functional improvement.

Study Design & Methods

This is a retrospective cohort study including 20 cases of treated advance tuberculosis of the hip (12 men, 8 women). Mean age was 35 years. Mean follow-up was 5 years.

Preoperatively MRI and bone gammagraphy was done to rule out any residual disease.

Patients started anti-tubercular drugs one month before the operation and were continued for 11 months post operatively. In addition antibiotic prophylaxis was done using cefazolin which was continued for 3 days.

Fluid and tissue samples harvested at operation were sent for Gram staining, acidfast bacilli staining, polymerase chain reaction, culture for mycobacteria and histological examination.

The patients were followed up clinically using the Charnley and Harris hip Score (HHS) as well as radiologically for any loosening of the implants and also for any recurrence of Tuberculosis.

Results

Pain, deformity, restriction of motion, and limb wasting were present in all patients. All patients underwent cementless THA. Histopathologic analysis was positive for all patients, with typical epithelioid granuloma with or without caseation.

No patient showed any signs of reactivation of the tuberculosis of their hip. There was no postoperative dislocation or any neurologic or vascular complications in any of the patients. At follow up, none of the patients had progressive radiolucent lines or cavities around the

prosthesis. At the final follow up the mean Charnley hip score improved from 8 pre-operatively to a mean of 15, and the mean HHS improved from 37.3 pre-operatively to a mean of 91.7.

Conclusions

Our series demonstrates the success of THA after a tuberculous arthritis of the hip. An increase in the number of cases of tuberculosis is expected because of the emergence of multiresistant strains of the bacterium and HIV infections. This study provides further evidence that THA is a safe procedure if undertaken in association with appropriate antituberculous therapy.