Evolution Of Chemotherapy In Osteoarticular Tuberculosis Over Last Decade : A Prospective Study Comparing The Clinico-Radiological Effectiveness Of Different Regimen In Medical Treatment Of Osteoarticular Tuberculosis

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Introduction: The discussion over the duration, type of therapy and regimen to be used in osteoarticular tuberculosis is losing importance in all orthopaedic gathering. Still little consensus is there over the universality of a treatment regime for osteoarticular tuberculosis.

Methods: 340 new cases of osteoarticular tuberculosis were included in the study that were medically treated in the department of orthopaedics in a tertiary care center between 2001 and 2011. Out of which 202 cases were of spinal tuberculosis and 138 cases of extraspinal tuberculosis. 88 cases of spinal tuberculosis were treated by conventional method and 114 cases by short course chemotherapy. 60 cases of extraarticular tuberculosis were treated by conventional chemotherapy and 78 cases by short course and intermittent therapy.

Results: All cases were diagnosed on clinical, radiological and haematological basis. Cases who received conventional therapy received 18-24 months of treatment irrespective to the clinical, radiological and haematological parameters. Whereas those who received short course (2HRZE+4 HR) and intermittent therapy (DOTS) were evaluated for clinical improvement, in the form of improvement in constitutional symptoms, resolution of abscess, healing of sinus and fall in ESR. All cases underwent regular radiological evaluation. The duration of treatment was accordingly tailored with all patients receiving a minimum of 6 months of continuous or intermittent therapy. Maximum follow up was of 7.8 years (conventional) minimum follow of 3 years (intermittent). The trend of fall in ESR, clinical and radiological parameters showed improvement beyond 2 years of initiation of treatment in cases that had stopped treatment at 6 months. But the improvement was slow after six months even in cases who received 24 months of chemotherapy. There were no relapses in all the three groups. Image 1 shows MRI picture at Initiation of treatment (Short Course Chemotherapy-2HRZE+4HR). Image 2 is the MRI picture after 6 months of stopping treatment i.e.,12 months after initiation of treatment.

Discussion: To compare the effectiveness of the effectiveness of regimes in these three groups the parameters needed were, clinical response of treatment in the form of healing of abscess, healing of sinuses (if present), constitutional symptoms, falling trend of ESR and neurological improvement. As well as radiological response of treatment like sclerosis fusion and resolution of abscess. This extensive study comparing conventional therapy, short course therapy and intermittent therapy reinforces that chemotherapy tailored to the response of treatment (6-9months) is the rational therapy. With short course/intermittent chemotherapy there was decrease in the duration of side effects and has bearing on the economical factors too.

Significance: The maximum incidence of cases and research in the field of tuberculosis is in Asia and Africa. However there is lack of consensus on the appropriate duration of treatment. Hence there is a need to standardize treatment, to prevent under-treatment, prevent acquired drug resistance, to avoid over-treatment, to minimize side effects and to be able to monitor and compare treatment outcomes. This study gives an insight over the evolution of different regimes as well as gives an understanding of the clinical treatment in osteoarticular tuberculosis.

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