TREATMENT OF SPINAL TUBERCULOSIS: CONSERVATIVE OR SURGICAL?

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SUMMARY

Much has evolved since Percivall Pott´s first description of vertebral tuberculosis. However, there still is much controversy regarding the best approaches to prevent deformities. The objectives of this study were to evaluate the clinical and X-ray characteristics of patients with vertebral tuberculosis and to compare the conservative treatment alone to the surgical one associated with antibiotic therapy, particularly regarding residual deformity and neurological deficit. A retrospective evaluation of baseline and end-point X-ray studies and of the medical files was performed. The neurological status was evaluated by using the ASIA scale and the deformities were measured using the Cobb method. Thirty-eight patients were evaluated: 11 were surgically treated and 27 received only antibiotics. Fifteen patients presenting neurological deficit showed improvement regardless of the treatment method employed. The mean focal and regional thoracic kyphosis at baseline was 48.8º and 47.86º, respectively. An increased incidence of thoracic deformity was found, also being the most affected segment, from 6.3º focal and 9.8º regional after 5 years. The type of treatment has not interfered on kyphosis progression. Patients below the age of 15 and with kyphosis above 30º had worse prognosis regarding deformity progression.

Keywords: *Tuberculosis; Spine; Kyphosis*

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INTRODUCTION

In 1779, Percivall Pott[1], in his monograph, was the first to associate tuberculosis and spinal disease. He described the nosologic and syndromic diagnostic. He noticed that, in patients showing lower limbs' palsy and spasticity these conditions were caused by an abnormal spine curvature. The onset was insidious, being faster in adults. The overall status showed little changes. The posterior paramedian incision on the torso and drainage of the dense material comprised within vertebrae determined a functional improvement of the affected limbs, allowing patients to ambulate six weeks later. He also noted that the vertebrae showed caries, augmented volume and spongy-like.

Spinal tuberculosis is the most frequent bone tuberculosis, accounting for 50%. It may be associated to pulmonary diseases or not. If left undiagnosed and not early treated may lead to major sequels such as paraplegia and deformities, which ultimately determine functional loss.

Regarding treatment, literature remains controversial. Compere and Jerome, Chandler and Page, and Cleveland apud Baley et al.[2] described their experiences with spinal arthrodesis through posterior approach. Bennett, Fallen and Kaplana apud Baley et al.[2] presented their results with conservative treatment. Kidner and Muro, Mayer and Adams apud Baley et al.[2] compared the conservative treatment to posterior arthrodesis in children, concluding that no treatment was superior to each other at the acute phase of the disease. However, in the late phases of the disease, when 3 or more vertebrae are collapsed, arthrodesis has shown to be a better approach, determining a lower kyphosis progression.

In surgical approach, we are faced with a new controversy: decompression and anterior, posterior or combined arthrodesis. The posterior fusion was introduced in 1961 by Hibbs and Albee apud Hodgson and Stock[3]. Decompression plus anterior fusion was introduced by Muller in 1906 apud Hodgson and Stock[3] and became popular after Hodgson.[3]

The advantage of the posterior surgery is that it presents less morbidity, while the anterior surgery can potentially decompress vertebral channel directly, provide injury débridement and fix deformities.

Hodgson and Stock showed that the anterior surgery with autologous rib graft determined a more significant reduction of the disease duration than conservative treatment alone, draining the caseous abscess and allowing for a faster bone fusion.[3]

Govender and Özdemir[4,5] showed that homologous grafts from a bone library associated to anterior instrumentation are superior to autologous ribs grafts, presenting a lower rate of graft migration in expense of a later union.

Study conducted at the Orthopaedics and Traumatology Institute, Hospital das Clínicas, Medical College, University of São Paulo.

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