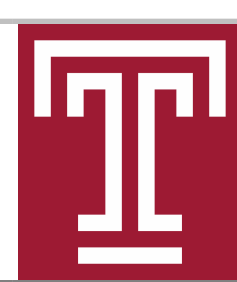




Operative and Non-Operative Management of Spinal Epidural Abscess, A Systematic Review

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Introduction

Spinal epidural abscess (SEA) is a rare diagnosis that has previously been treated with urgent surgical decompression and antibiotics. Recent availability of magnetic resonance imaging (MRI) makes early diagnosis possible and allows for the non-operative treatment of SEA in select patients. The first retrospective review of medically and surgically managed SEA patients was published in 1999, and since that time several other retrospective institutional reports have been published (1). This study reviews these published reports and compares aggregate data with historical treatment data.

Methods

A PubMed keyword search for “spinal epidural abscess surgical treatment” and “spinal epidural abscess medical treatment” was used and returned 589 and 347 references, respectively. A filter for publications after 1999 was applied. After identifying articles comparing surgical to non-surgical treatment strategies for SEA, the references were further reviewed for additional articles.

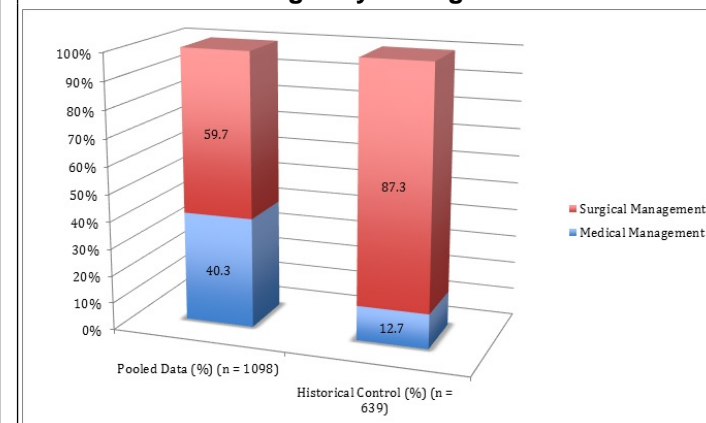
Results

11 articles were obtained directly comparing surgical to non-surgical management of SEA. The total number of patients in the articles amounted to 1069. The average age of treated patients was 57. 62% of treated patients were male. The most common pathogens found in blood and wound cultures were MRSA (17.5%), MSSA (36.9%), and Streptococcus spp (6%). 59.6% of patients were initially treated with surgery, while 40.3% received medical therapy. This was a significant increase in the proportion of medically managed patients from the historical control prior to 1999 ($P < 0.05$) (2). Patients with no neurological deficits were significantly more likely to be treated medically than surgically ($P < 0.05$). Medical therapy failure was reported to be 25%.

Conclusions

Since reporting of non-operative treatment in SEA, there has been a large trend towards treating neurologically-intact patients with medical management. Despite this, a fair amount of patients fail medical therapy and require close observation. Further research may help identify patients at greater risk of failing medical therapy.

Number of medically managed patients compared to surgically managed



Comparison historical management of SEA patients compared to current management

Learning Objectives

1. Show the current trend in treatment for spinal epidural abscess.
2. Identify current knowledge gaps in the treatment of spinal epidural abscess.

References

1. Rigamonti D, Liem L, Sampath P, Knoller N, Namaguchi Y, Schreiberman DL, Sloan MA, Wolf A, Zeidman S: Spinal epidural abscess: Contemporary trends in etiology, evaluation, and management. *Surg Neurol* 52:189–197, 1999.
2. Reihnsaus E, Waldbaur H, Seeling W. Spinal epidural abscess: a metaanalysis of 915 patients. *Neurosurg Rev* 2000;23:175–204; discussion 205.