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Letter to the Editor Regarding "Predictors of Failure for Nonoperative Management of Spinal Epidural Abscess" by Hunter et al

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We have read with great interest the article by Hunter et al entitled "Predictors of Failure for Nonoperative Management of Spinal Epidural Abscess."[1]

The spinal epidural abscess (SEA) is rare but insidious disease. Recently, the mortality varies from 1,8% to 25%. Approximately 45% of the patients have permanent neurological deficit.[2] Due to the unspecific disease course, the diagnosis is being delayed in about 89% of the cases. The correct diagnosis should be established before the development of severe neurological deficit for it may negatively affect the treatment outcome.[3]

An important issue on which there is no consensus is whether the treatment should be conservative only or a combination of surgical and conservative methods. The indications for the type of treatment depend on various factors such as the type of SEA, the overall physical status of the patient and the degree of neurological impairment.

The spontaneous SEAs are divided into primary and secondary depending on whether the infection develops directly within the spinal epidural space or it is a sequel of a spondylodiscitis or a paravertebral abscess.[4] The primary SEA may rapidly compromise the neural structures located in the spinal canal, necessitating an emergency surgical evacuation. The secondary SEA develops gradually, therefore it may be treated conservatively if patients are neurologically intact.

Conservative treatment is indicated for patients with low-volume SEA, absent or minor neurological deficit, panspinal infection, paralysis lasting more than 72 hours or in cases not amenable to surgery.[5] The detailed neurological examination of the patient is essential for determining the type of treatment. The Frankel's scale defines the degree of spinal cord damage, but it is not applicable for abscesses below the level of conus medullaris. Frankel grade <E is an overall indicator as it includes incomplete motor loss (Grade D) and complete motor and sensory loss distal to the level of injury (Grade A). In this regard we consider that the Modified Rankin Scale (mRS) and the American Spinal Injury Association (ASIA) scale would be more useful and appropriate.[4]

Literature evidence shows that the main factors for an unsuccessful conservative treatment of SEA are age over 65 years, significantly high CRP levels, leukocytosis, bacteremia, Methicillin-resistant Staphylococcus aureus (MRSA), etc. The simultaneous existence of these factors increases their negative impact on outcome.[6] According to Hunter et al the ethnic factor is of great interest as it leads to genetic predisposition to such infections, although it is subject to bias as it may involve people with similar socioeconomic status (education, income, living environment, hygiene habits).

According to Arko et al the unsuccessful conservative treatment of SEA varies between 6% and 49%. Thus, it should be performed by a multidisciplinary team with close monitoring of the disease course and dynamics of the laboratory and imaging studies.[7] Although significant part of the patients with SEA respond well to antibiotic therapy, a long-term follow-up is needed to rule out the ocuurance of secondary SEA. In about 40% of the cases, subsequent surgical intervention is required.[8] Vertebral ankylosis is commonly associated with narrowing of the intervertebral foramina, segmental spinal deformity or spondylolisthesis that may lead to compression of the neural structures. The chronic pain in

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conservetively treated patients may be secondary to scoliosis, kyphosis and pseudoarthrosis.

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