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Epidural Spinal Injections in Spinal Stenosis due to Lipomatosis: With or without Steroids?

Spinal epidural lipomatosis (SEL) is characterized by the overgrowth of epidural adipose tissue inside the spinal canal and may present with symptoms of spinal stenosis or nerve root compression.[1] In a recent study, it has been reported that 6.26% of patients presenting with clinical signs of spinal stenosis showed symptomatic SEL.[2] Spinal epidural infiltrations under imaging guidance are a safe treatment for symptomatic spinal stenosis and are frequently performed by interventional radiologists. Usually, a mixture of local anesthetics and corticosteroids is used. Botwin and Sakalkale[3] reported a good clinical response (pain relief of 80%–85%) after epidural injections with steroids in 2 patients with SEL and symptoms of spinal stenosis. On the other hand, repeat epidural infiltrations with corticosteroids have been discussed as an etiologic factor in the development of SEL. The study by Jaimes and Rocco[4] reported that >1 epidural steroid injection was linked to the occurrence of SEL in a logistic regression model.

Because larger studies and prospective investigations are missing, the interventional radiologist is in a dilemma whether steroids should be used in symptomatic SEL. In these cases, we suggest a pragmatic approach. According to the data of Jaimes and Rocco,[3] the first epidural injection can be performed with the use of steroids. In their study, a single epidural steroid injection was not associated with SEL; it seems that a single dose of epidurally administered steroids is not enough to aggravate epidural fat accumulation.

In the case of a symptomatic spinal stenosis, we usually perform a single epidural injection using CT guidance and an interlaminar approach with the use of steroids and local anesthetics (4 mL of mepivacaine/1 mL of dexamethasone). If there is a marked improvement after this first injection, other treatment components such as physiotherapy and medication are adjusted to maintain the improvement. Only in the case of persistent or immediately relapsing pain is treatment with epidural injection repeated. The safe time interval between 2 epidural injections with steroids in patients with good clinical SEL is unknown. If there is no significant improvement after the first injection with steroids in symptomatic SEL, we think further injections in the short term should be performed with local anesthetics only.

In a recent meta-analysis, no significant difference between epidural injections with steroids and local anesthetics or local anesthetics alone has been found[5]—that is, an epidural injection with local anesthetics only is also an evidence-based approach. This sequential use of an injection with steroids followed by infiltrations without steroids may limit the risk of worsening SEL. In the treatment of patients with symptomatic SEL, the underlying etiology should also be considered. For example, in patients with SEL due to obesity, weight reduction has been shown to reduce SEL.[6]

In conclusion, evidence in the treatment of spinal stenosis due to SEL with epidural infiltrations is very limited. We propose a sequential approach using an epidural infiltration with steroids for the first injection followed, if needed, by further epidural infiltrations with local anesthetics only. This procedure may reduce deleterious effects on the progression of SEL. Further studies on this topic are needed.

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