

Epidural fibrosis

General information

Although peridural [scar](#) tissue is frequently blamed for causing recurrent symptoms,^{1) 2)} there has been no proof of a correlation between the two³⁾.

[Peridural fibrosis](#) is an inevitable sequela to [lumbar disc surgery](#) just as post-op [fibrosis](#) is a consequence of any surgical procedure. Even patients who are relieved of their pain following [discectomy](#) develop some scar tissue post-op⁴⁾.

Although it has been shown that if a patient has recurrent [radicular pain](#) following a [lumbar discectomy](#) there is a 70% chance that extensive peridural scar will be found on [MRI](#)⁵⁾, this study also showed that on post-op MRIs at 6 months, 43% of patients will have extensive scar, but 84% of the time this will be asymptomatic⁶⁾. Thus, one must use clinical grounds to determine if a patient with an extensive scar on MRI is in the 16% minority of patients with radicular symptoms attributable to scar.

Postoperative epidural [fibrosis](#) (PEF) localized around the exposed dura and nerve roots is a known radiologic entity seen after [lumbar spine surgery](#). Although excessive PEF is associated with residual and new lumbar pain and radiculopathy, its role as the generator of the pain is still discussed. Various materials acting as an adhesion barrier have been tested. There is no undebated class I evidence that any one of them is suitable to reduce or avoid PEF and provide a better clinical outcome.

Dural [fibrosis](#) and epidural adhesion after [laminectomy](#) are developed from adjacent dense [scar](#) tissue, which is a natural [wound healing](#) process^{7) 8) 9) 10)}, and ranked as the major contributor for [postoperative pain](#) recurrence after laminectomy or discectomy, and has been implicated as an important cause of [failed back surgery syndrome](#).

The epidural hyperplasia can extend to the spinal canal and adhere to the dura and nerve root, which lead to the periodic recurrent symptoms including [radicular pain](#)^{11) 12) 13) 14) 15)}.

At the same time, dural fibrosis made the risk of nerve root injury, dural laceration and Iatrogenic injury greatly improved, which challenging doctors for exploring the operation technology^{16) 17) 18)}.

Although the epidural scar tissue adhesion can be removed and the adhered nerve root can also be released, but this need second operation^{19) 20) 21)}.

A reoperation on the scar can produce more scarring^{22) 23)}.

Peridural scar prevention

see [Peridural scar prevention](#).

Treatment

Epiduroscopic laser neural decompression (ELND) provides a new view of the **epidural space** as well as an alternative treatment for a herniated disc and **epidural fibrosis**.

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