# A mimicker of a postoperative spinal mass: gelfoam in a laminectomy site.

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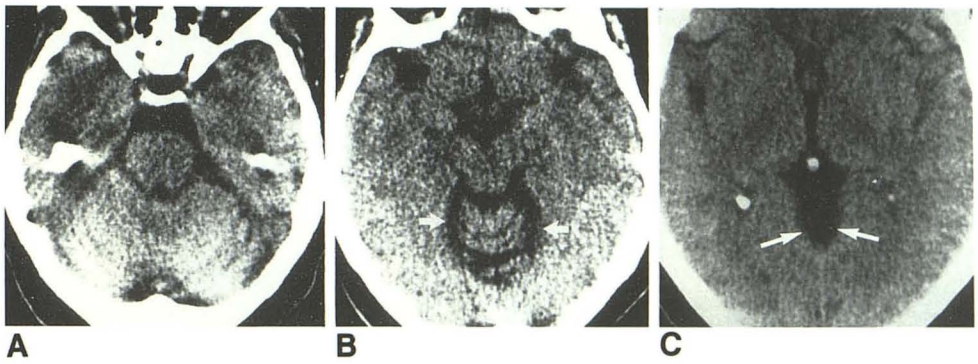


**Fig. 1.—*A–C*, Plain cranial CT scans at levels of fourth ventricle (*A*), midbrain (*B*), and third ventricle (*C*) show widening of supracerebellar cistern (*long arrows*) and prominent cerebellar folia cisterns (*short arrows*). Fourth ventricle is normal.**

curred in a pattern previously reported as consistent with PCD [4]. An intensive search for malignancy was carried out, but the findings on chest film, mammograms, thyroid scan, and chest and abdominal CT scans were all within normal limits.

The results of a pelvic examination suggested a uterine leiomyoma but no abnormalities of the ovarian structures. These findings were confirmed by pelvic CT scan.

The patient's condition continued to deteriorate, and selective laparoscopy and laparotomy were performed 2 months after her first admission to the hospital. A 1.5-cm mass that was discovered in the right ovary proved to be a poorly differentiated carcinoma. No metastases were found. The results of a serum assay for antibodies to Purkinje cells were positive (1:1000). The patient's clinical condition stabilized after the surgery.

### Discussion

PCD is characterized pathologically by a widespread loss of Purkinje cells and thinning of the granular layers of the cerebellum. Jaeckle et al. [4] reported that the presence of antibodies to Purkinje cells is specific for PCD, though not all patients who had this syndrome tested positive for the antibody. In addition, Greenlee and Brashear [2] detected antibodies in two of 14 patients who had ovarian carcinoma and no neurologic symptoms. The antigenic stimulus that leads to the production of these antibodies is unclear, and several hypotheses have been suggested [4].

The CT findings of PCD are nonspecific. The differential diagnosis includes hereditary cerebellar degenerative disorders and alcohol abuse. In the absence of either alcohol abuse or a family history of PCD, a patient who has a progressive cerebellar ataxia and a CT scan that shows generalized cerebellar cortical atrophy should be evaluated for the presence of an occult malignancy.

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## A Mimicker of a Postoperative Spinal Mass: Gelfoam in a Laminectomy Site

After a laminectomy, absorbable gelatin sponges (Gelfoam) may be placed in the dorsal epidural space. The Gelfoam mixes with blood and plasma and on MR may have an appearance that simulates a compressive postoperative epidural mass. We report two such cases.

### Case Reports

*Case 1*

A 55-year-old man underwent a laminectomy at T8–T11 for drainage of a posttraumatic spinal cord cyst. The patient complained of postoperative back pain and had fluctuating weakness in his right leg. An MR scan obtained 11 days after surgery showed an abnormality that simulated an epidural mass (Fig. 1 A–C). Because he had no significant change in his neurologic symptoms, the patient was followed clinically, and his pain and weakness improved. On the follow-up MR obtained 10 days later, the effect of the epidural mass was diminished (Fig. 1D).

*Case 2*

A 42-year-old woman had a laminectomy from T6–T7 to T9 for resection of a cord hematoma. On MR 9 days later, an inhomogeneous mass with a similar effect and signal intensity as that seen in case 1 was noted at the laminectomy site (Fig. 2). The patient experienced no postoperative neurologic deterioration.

### Discussion

When intradural spinal surgery is performed, Gelfoam strips or particles are commonly placed in the dorsal spinal canal at the levels of laminectomy after the dura is closed. Historically, Gelfoam was used to prevent epidural scarring [1], but because recent studies have shown that it induces scarring, our surgeons use Gelfoam in

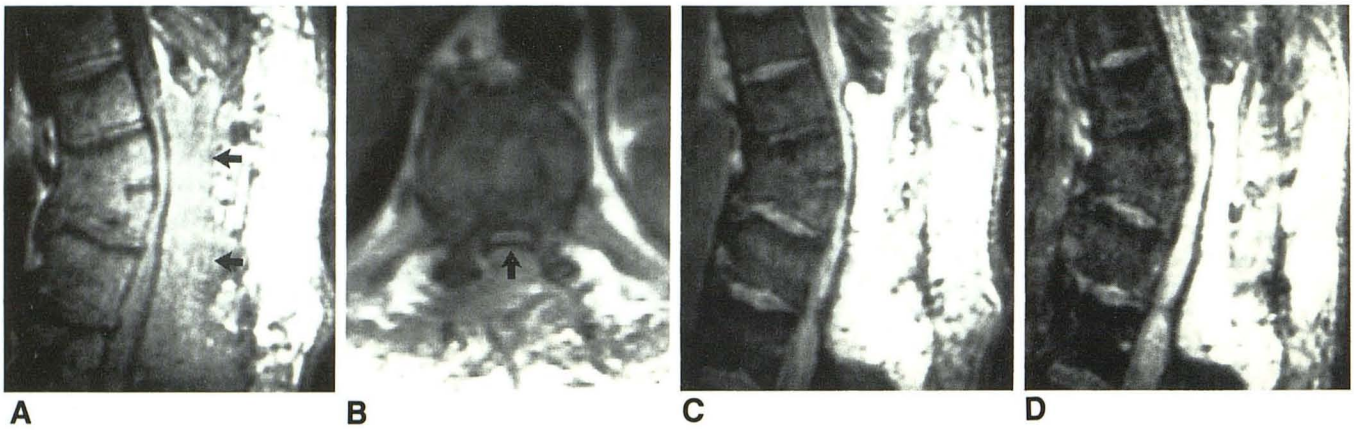


**Fig. 1.—Case 1. MR images of postlaminectomy changes associated with use of Gelfoam.**
***A*, Sagittal image (TR/TE 800/26) of lower thoracic spine shows inhomogeneous substance (*arrows*) within soft tissues of back at laminectomy site. Compression of epidural space and spinal cord is present.**
***B*, Axial image (TR/TE 1000/26) also shows cord compression from this posterior epidural mass (*arrow*).**
***C*, Sagittal image (TR/TE 2000/60) shows increased signal intensity of posterior epidural substance.**
***D*, Sagittal image (TR/TE 2000/80) obtained 10 days later shows decreased size of mass and less cord compression, suggesting retraction or partial resorption of this substance. Signal intensity was identical to that of Fig. 1C.**

the epidural space to seal the dura and prevent a potential leakage of CSF. In addition, Gelfoam can be used to tamponade epidural venous bleeding after a wide laminectomy. In the two cases presented here, the postoperative mass we noted was probably a mixture of Gelfoam, blood, plasma exudate, and early granulation tissues. The inhomogeneous signal within the mass on T1- and T2-weighted images is consistent with a mixture of fluid and blood in the methemoglobin phase. The areas of increased signal on T2-weighted images that were isointense on T1-weighted images indicate the presence of an exudate (Fig. 1A vs Fig. 1C). Diminished cord compression in the follow-up study (case 1) suggests that partial resorption of edema, blood, and Gelfoam occurs with time. Recognition of these findings in a patient who recently has had a laminectomy is important so that they will not be confused with a pathologic process, specifically a postoperative epidural hematoma or abscess.

**Fig. 2.—Case 2. Sagittal MR image (TR/TE 2000/80) of thoracic spine obtained 9 days after a laminectomy shows hyperintense mass at laminectomy site causing effacement of posterior subarachnoid space and compression of thecal sac.**

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