Clinical: Identifying and treating the pain generator

Evaluation of the Functional Anesthetic Discogram as a Screening Tool for Lumbar Fusion to Treat Degenerative Disc Disease

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Background: Degenerative disc disease is the cause of significant pain and disability. Generally, most patients recover with standard non-operative treatments including rest, physical therapy, and anti-inflammatory medications. However, there are many questions regarding the treatment of those patients who have tried the standard non-operative treatments and still remain symptomatic. Lumbar fusion and disc replacement are potential options. However, MRI and provocative discograms have been demonstrated to have poor reliability in screening these patients for surgery. The functional anesthetic discogram (FAD) is a test where a balloon catheter is inserted into a disc that tested positive during discography. The balloon is inflated and this docks the catheter in the disc. Then, the patient is allowed to get off the procedure table and recreate their most painful positions. Then, a local anesthetic is injected through the catheter and the patient repeats the movement again. The pain scores before the injection of the anesthetic and after are recorded.

Study design: Retrospective cohort review.

Objective: To determine the accuracy of the functional anesthetic discogram in screening patients with lumbar disc degeneration for surgery.

Method: A retrospective review was performed of all the patients at our institution who had the functional anesthetic discogram. The test was considered positive if the patient's pain decreased by at least 50% with the FAD. Follow up was at least 1 year.

Results: Overall, there were 21 patients who had the FAD. Of the 7 patients who had at least a 50% reduction of their pain with the FAD and subsequently underwent surgery, all 7 had at least a 50% reduction in their pain. The mean VAS prior to surgery was 8.2, the mean VAS after surgery was 3.3. Also, all 7 of these patients returned to work and were still working as of their last follow up. There were 3 patients who had surgery despite no improvement with the FAD. All 3 of these patients reported no improvement with surgery. Of the remaining 11 patients, 9 patients did not improve with the FAD and did not have any surgical intervention. 2 patients did improve with the FAD but chose not to have surgery.

Conclusion: Lumbar fusion or disc replacement for disc degeneration remains a topic of much debate. Proper selection of these patients for surgery is critical for a good outcome. The FAD appears to be an effective screening tool on initial inspection.