

Preoperative Laryngoscopic Examination in Patients Undergoing Repeat Anterior Cervical Discectomy and Fusion

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Introduction

Patients who experience a recurrent laryngeal nerve injury (RLI) after undergoing an Anterior Cervical Discectomy and Fusion (ACDF) procedure may eventually become asymptomatic. If these patients undergo subsequent ACDF while having an asymptomatic vocal cord abnormality they may be at risk for developing bilateral vocal cord paralysis if the follow up surgery is performed on the opposite side of their original (RLI). Because of these concerns we began a program of referring patients for preoperative laryngoscopic examinations, who were being considered for revision /redo ACDF.

Methods

IRB approval was obtained. Patients who were referred for preoperative laryngoscopic examination prior to revision ACDF were reviewed retrospectively from the period 2006 – 2010. All patients underwent examination by an ENT specialist using a nasopharyngoscope in combination with video stroboscopic examination.

Results

23 patients were identified having undergone preoperative laryngoscopy and subsequent revision ACDF. 18 patients had undergone a previous single level ACDF and 5 patients had undergone a previous 2 level surgery. The mean time interval from the previous ACDF procedure was 40.3 months (range 13-84 months). Significant findings were found in 4 patients. 2 patients presented with asymptomatic vocal cord paralysis, 2 patients presented with chronic hoarseness after previous ACDF. One was found to have a vocal cord paralysis and the other had a vocal cord mass. In these patients the surgery was performed on the same side as the vocal cord abnormality. Patients who had a normal laryngoscopic examination underwent surgery from the side opposite to their original surgery.

Conclusions

In our series 17.3% of patients undergoing preoperative laryngoscopic examination exhibited abnormalities which affected decision making regarding side of approach for revision ACDF. Preoperative laryngoscopic examination is a simple and effective way of screening patients for abnormalities prior to revision ACDF surgery.

Learning Objectives

By the conclusion of this session, participants should be able to: 1. Describe the importance of preoperative laryngoscopic examination. 2. Describe the complications of bilateral vocal cord paralysis. 3. Discuss whether preoperative laryngoscopic examination should be a part of the standard evaluation of patients undergoing repeat anterior cervical discectomy and fusion.

References

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