Factor Affecting Clinical Outcome and Surgical Time in Cervical Anterior Approach : BMI & Neck Circumference

Minki Kim; Sung Bum Kim; Tae Sung Kim MD
Department of Neurosurgery
School of Medicine, Kyung Hee University

Introduction

When we performed anterior cervical discectomy and fusion, sometimes neck dissection times took more than expected. Author tried to figure out the factors that affecting the dissection time including BMI and neck circumference. The purpose of this study was to evaluate the reliability of BMI and neck circumference during cervical anterior approach in association with the clinical outcome.

Methods

The numbers of patients were 30 underwent anterior cervical discectomy and fusion from June 2011 to July 2012. All patients checked BMI and neck circumference preoperatively. Dissection time was defined as skin incision to application of Casper retractor and checked intraoperatively. The authors reviewed medical records, operative findings and postoperative clinical results, retrospectively. Simple X-ray and computed tomography were evaluated preoperatively and postoperatively.

Results

Ages of patients ranged from 37 to 71 years (mean: 54.2 years) and there are male predominant. All patients presented with cervical degenerative disease, 21 patients with radiculopathy, 9 with myelopathy. Mean dissection time was 22 minute and mean BMI was 25.25. High BMI score are associated with an increased time of dissection ($p=0.088$) than large neck diameter ($p=0.106$). But there were not considered statistically significant. There were no significant differences in clinical outcomes in measured value BMI and neck circumference. Post operative complications were minimal.

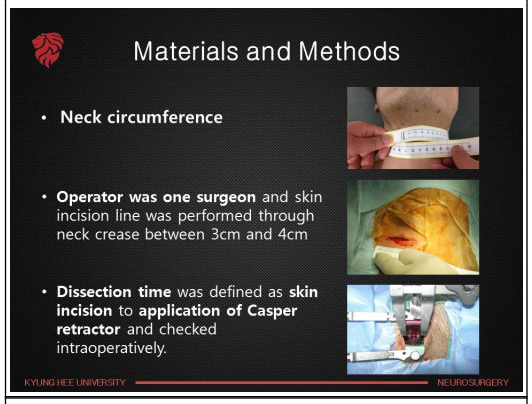
Conclusions

We conducted a prospective study in which we evaluated the factor affecting clinical outcome and surgical time in cervical anterior approach. BMI and neck circumference are an easy method to check when performing cervical anterior approach preoperatively and it may be helpful in predicting outcomes. This study demonstrates the applicability and usefulness of BMI and neck circumference in cervical anterior approach.

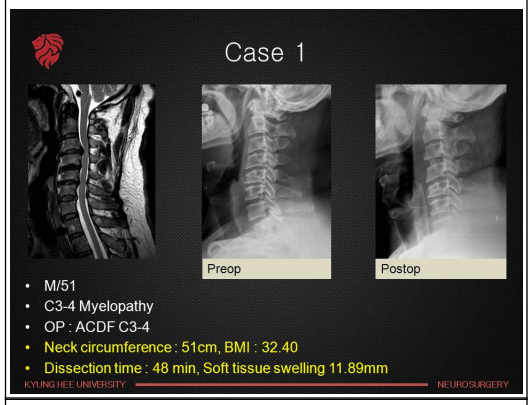
Learning Objectives

By the conclusion of this session, participants should be able to understand the applicability and usefulness of BMI and neck circumference in cervical anterior approach.

Material & methods



Case



Case