신경근육재활 및 전기진단

게시일시 및 장소 : 10 월 18 일(금) 08:30-12:20 Room G(3F)

질의응답 일시 및 장소 : 10 월 18 일(금) 10:00-10:45 Room G(3F)

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Relationship Of Intervertebral Foraminal Stenosis With Dermatomal Somatosensory Evoked Potentials

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Introduction

The dermatomal somatosensory evoked potential (DSEP) study is a method for evaluating the abnormality of the somatosensory tract, which extends from the peripheral nerve to the cerebral cortex. In patients with radiculopathy, DSEP can be an auxiliary diagnostic regimen secondary to needle electromyography.

Objectives

This retrospective study was performed to identify if there is a relationship between stenosis of intervertebral foramen (IVF) and DSEP findings

Methods

This study reviewed patients (n=37) who were examined by DSEP and lumbar spine MRI from 2017 to 2018. For the evaluation of IVF size, bilateral L4/5 and L5/S1 IVF were selected and measured at the narrowest IVF image of sagittal MRI view, and the pixel count of the area was defined as the size using the Lasso Tool of the adobe photoshop CC 2019 program. In addition, foraminal stenosis was graded to 4-point-scale. DSEP results were divided into normal and abnormal.

Results

Depending on the results of L4 DSEP, L4/5 IVF (n=74) were assigned to normal DSEP site (n=49), abnormal DSEP site (n=25). Likewise, depending on L5 DSEP results, L5/S1 IVF (n=74) were assigned to normal DSEP site (n=16), abnormal DSEP site (n=58). The average IVF size were smaller in the abnormal DSEP sites than normal DSEP sites (L4/5 level; mean pixel count = 226.08±77.03 VS 187.24±73.18, L5/S1 level; mean pixel count = 186.06±47.65 vs 161.12±70.08). There was a significant difference in the pixel count between the normal and abnormal DSEP sites in only L4/5 level (p=0.041). In L5/S1 level, there was no significant differences in IVF size between the normal and abnormal DSEP sites (p=0.106).

There was no significant difference in IVF stenosis grade between the normal and abnormal DSEP sites.

Conclusion

Our results showed that IVF size was significantly related to L4 dermatomal somatosensory pathway dysfunction patients.

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