The Comparison of the Result of Epiduroscopic Laser Neural Decompression between FBSS or Not

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Background:

Epiduroscopic laser neural decompression (ELND) has been performed as a treatment tool for chronic refractory low back pain and/or radicular pain. There are some studies about the usefulness of epiduroscopy for post lumbar surgery syndrome, however, few studies about the effectiveness of epiduroscopy for patients without back surgery. We compared the satisfaction of patients who underwent ELND for chronic low back pain and/or radicular pain after back surgery and for the same symptoms without surgery.

Methods:

We compared the degree of satisfaction of patients after ELND between who had underwent the lumbar spine surgery and who had not retrospectively by chart reviewing. We divided 39 patients who had received ELND into two groups, one is the group of patients who got the lumbar surgery (group 1), and the other is the group of patients who did not (group 2). Their medical records including age, sex, previous treatment, duration of illness, degree of symptom relief were investigated. We compared each items between two groups.

Results:

The number of patients in group 1 was 17, and group 2 was 22. In group 1, 16 patients (94.1%) showed more than ‘Acceptable’, and 19 patients (86.4%) showed more than ‘Acceptable’ in group 2. There is no significant differences statistically in percentage of patients who showed more than ‘Acceptable’ in the satisfaction after ELND between two groups.

Conclusions:

ELND provided satisfaction (more than 85%) for patients with chronic low back pain and/or leg pain regardless of previous back surgery history. (Korean J Pain 2014; 27: 63-67)

Key Words:
chronic low back pain, epiduroscopic laser neural decompression, post lumbar surgery syndrome.
INTRODUCTION

Chronic low back pain and/or radicular pain are one of major challenges of pain physicians. Various treatment modalities have been presented for chronic low back pain and/or radicular pain. Briefly, treatment modalities for chronic low back pain and/or radicular pain are divided into conservative treatments like physical therapy, pharmacotherapy and interventional treatments, and surgery. Recently, minimal invasive techniques like epiduroscopic laser neural decompression (ELND) have been introduced and used for many cases of chronic low back pain and/or radicular pain [1]. In most cases, patients with chronic low back pain and/or radicular pain receive conservative treatments or interventional treatment like nerve block at first. When it fails, surgery is often considered for next step. However, lumbar surgery has potential risks, especially, refractory chronic back pain which is called post lumbar surgery syndrome [3,4].

ELND is the procedure which observes the epidural space via epiduroscope and removes lesions like protruded discs, adhesions, and fibrosis using by laser. Choy [2] reported about the treatment of lumbar disc herniation by percutaneous laser disc decompression in 1998. Since then, instruments have been advanced and pain physicians have applied the laser during the epiduroscope for the treatment of low back pain and/or radicular pain caused by herniated lumbar disc, adhesions or fibrosis in the epidural space. Most studies focused on the usefulness of epiduroscope for the patients with the post lumbar surgery syndrome [3,4]. However, there are no studies about the usefulness of epiduroscope for the patients with chronic back pain and/or radicular pain who did not get surgery, and only received medications and nerve blocks.

We were interested in the value of epiduroscopy as the treatment modality for chronic low back pain and/or radicular pain before considering surgery. This study is designed for the comparison of the satisfaction of patients who underwent ELND for chronic low back pain and/or radicular pain after back surgery and without surgery.

MATERIALS AND METHODS

A retrospective follow-up investigation was conducted according to the medical records of thirty-nine patients who received ELND at the pain center. We performed the ELND for the patients complaining of refractory low back and/or lower extremity pain which was not improved despite any other treatments including medication, epidural steroid injection, and surgery, or in cases of which 50% or more of the pain returned within 1 week in principle.

If the patient wanted to get ELND as a first therapy for low back and/or lower extremity pain, we performed ELND at once. Patients who had coagulopathy or who did not want to get ELND were excluded. ELND of all cases was performed by one pain physician. We looked into epidural space by epiduroscope via caudal approach and removed the lesions that caused low back pain and/or radiculopathy by laser. The age, sex, duration of the pain, previous treatments and degree of patients’ satisfaction after the procedure were recorded for all patients. The duration of the pain was expressed as years and months. Degree of patients’ satisfaction was categorized into 3 stages: ‘Good’, ‘Acceptable’, ‘Bad’ on the basis of the patients’ comments stated in the medical records at 4 weeks after the procedure. Patients then were categorized into two groups: patients who had the history of lumbar surgery (group 1), and patients who did not (group 2). Results were represented as means ± SD or number of patients (%). Statistical analyses were performed using SPSS version 18.0 (SPSS Inc., Chicago, IL, USA). Student T-test was used for comparison of age and duration of low back pain and/or radiculopathy before ELND between two groups. And Chi-square test was used for comparison of gender, degree of satisfaction, improvement after ELND between two groups. P values of < 0.05 were considered statistically significant.

RESULTS

Data of group 1 and 2 patients are demonstrated in Table 1 and 2 respectively. Comparison between two groups is described in Table 3. The number of patients in group 1 was 17, and group 2 was 22. Mean age was 61.6 and 59.3 in group 1 and 2 respectively and mean duration of illness was 6.6 years and 3.4 years in group 1 and 2 respectively. There was no statistical differences in composition of sex and age between two groups, however, mean duration of illness was longer in group 1 (P = 0.047). In group 1, sixteen patients (91.2%) reported the degree of satisfaction as more than ‘Acceptable’, and nineteen patients in group 2 (86.3%) did. There was no statistical difference in the rate