The effect of 2nd operation health and social care essay

ASSIGN BUSTER

Abstract

Background: Failed back syndrome or failed back surgery syndrome (FBSS) refers to a condition in which a patient has undergone back surgery with a poor outcome. Patients with FBSS are a diverse group, with complex and varied etiologies and pain sources. They also vary with regard to their clinical complaints and psychological status. Patients with FBSS typically experience a decrement in their functional capacity, morale, and productivity. They are also more vulnerable to developing psychosocial problems and addiction to pain medication. Methods: Thirty five cases were evaluated as FBSS and analysed as a retrospective case-series study. These cases were collected from Feb. 2009 to June 2012 in Neurosciences hospital and 2 private hospitals (Red Crescent and Al-Amal). FBSS were accepted as the cases which were in worse condition than their former preoperation status or were not better postoperatively. All cases were submitted to another surgery as a treatment of FBSS. RESULTS: Thirty five cases; 18 were females (51. 4%) and 17 were males (48. 6%). Ages ranged from 22 to 72 and the average of ages was 49±13. 5. The onset of symptoms of FBSS cases ranged from 15 days to 12 months. We analysed these thirty five cases in total that were operated because of FBSS. 24 cases (68. 5%) were due to recurrent disc herniation, 5 cases (14. 2%) were due to epidural fibrosis, 2 cases (5. 7%) were due to lumbar stenosis, 2 cases (5. 7%) were due to foraminal stenosis, 1case (2. 8%) was due to discitis and paraspinal abscess and 1case (2. 8%) was due to CSF fistula. Success rate according to the Japanese Orthopaedic Association (JOA) scoring; was found as 40. 6% for the cases with epidural fibrosis and %76. 9 for the cases with recurrent disc herniation (DH). Statistical

comparison was found as meaningful. (p <0. 05)Conclusion: In conclusion, recurrent disc herniation; which occur on the same level, the same side or opposite side, is the most frequently observed (68. 5%) of reoperation. Epidural fibrosis formation is secondly frequent cause (14. 2%) of reoperation. While the success rate of all failed back surgery syndrome cases is found as; 40. 6% for the patients with epidural fibrosis and 76. 9% are reported for the patients with Lumbar disc herniation (DH). The statistical comparison is found as meaningful of these cause to re operate successfully (p <0. 05). while the other causes of failed back surgery are statistically non vulnerable to re operate. Key words: Failed back surgery syndrome, recurrent disc herniation, epidural fibrosis* Lecturer in Neurosurgery/ Surgery Department / Al-Mustansiryia University, College of Medicine/E mail: aljubourihayder@yahoo. com

Introduction:

Back pain is a widespread public health problem, affecting a staggering 80% of population at some point in their lives (1). Back and/or neck pain is cited as the second most common reason for physician visits, and it is estimated that 25% of all work injuries are related to low back pain.(2, 3)Surgery represents an important treatment option for physicians in managing chronic back pain, especially conditions that are intractable to more conservative interventions. Except for emergency situations, surgery is only undertaken after attempting less invasive procedures. The most common conditions for which surgery is recommended are disc bulge, disc herniation, and disc disruption; spinal stenosis, spondylosis, spondylolisthesis, and failed back surgery syndrome. Failed back syndrome or failed back surgery syndrome

(FBSS) refers to a condition in which a patient has undergone back surgery with a poor outcome. Patients with FBSS are a diverse group, with complex and varied etiologies and pain sources. They also vary with regard to their clinical complaints and psychological status. Patients with FBSS typically experience a decrement in their functional capacity, morale, and productivity. They are also more vulnerable to developing psychosocial problems and addiction to pain medication. In the aftermath of an unsuccessful surgery, and faced with mounting physical and psychological problems, many FBSS patients seek treatment from chronic pain centers. (4)

Methods:

Thirty five cases were evaluated as FBSS and analysed as retrospective case-series study. These cases were collected from Feb. 2009 to June 2012 in neurosciences hospital and 2 private hospitals (Red Crescent and Al-Amal). FBSS were accepted as the cases which were in worse condition than their former preoperation status or were not better postoperatively. All cases were submitted to another surgery as a treatment of FBSS. A 35 patient diagnosed as FBSS. FBSS were accepted as the cases which were in worse condition than their former preoperation status or were not better postoperatively. We evaluated these cases before submitted to find out the reason of FBSS using: Lumbosacral dynamic x-ray (flexion and extension) for diagnosis of instability. CT scan and MRI were applied to all cases before surgery. It was aimed to have an idea about the bone area; laminectomy, taken in the former surgery; and especially facet joints (facet hypertrophy, facetectomy) examined carefully. Fibrosis existence or absence was searched especially in the image with contrast. Recurrent herniation or not.

Cerebrospinal Fluid (CSF) existence or absence related to dural damage was carefully analysed. Materials related to disc infection or not. Another disc level pathology. The whole 35 FBSS cases were submitted to 2nd surgery as a treatment after failing of the conservative measurement. Before that Japanese Orthopaedic Association (JOA) Scoring was used for evaluation of preoperative clinical symptoms of the FBSS cases (Table 2). (5) The evaluation of surgical result was made according to the preoperative and postoperative JOA scores comparisons. Surgical Assessment: (post-op. JOA score – pre-op. JOA score) / (29- pre-op. JOA score) x100%. In our study, statistical analysis of cases Student-T and Ki Square (x2) were used in SSPS computer programme. Table 1. JOA Classification

1-Subjective Symptoms

9 score

A-Low back paina-None3b-Occasional mild pain2c- Frequent mild1d-Occasional severe pain0B-Leg paina-None3b-Occasional slight symptoms2c-Frequent slight symptoms1d-Frequent severe symptoms0C-Gaita-Normal3b-Able to walk > 500 meters but painful2c-Unable to walk > 500 meters1d-Unable to walk > 100 meters0

3-Urinary bladder function

A-Normal0B-Mild dysuria-3C-Severe dysuria-6

2-Clinical Symptoms

6 scores

A-Straight leg raisinga-Normal (> 70 angle)2b-30 to 70 angle1c-<30 angle0B-Sensory disturbancea-None2b-Slight disturbance1c-Marked

disturbance0C-Motor disturbancea-Normal2b-Slight weakness (4 power)1c-Marked weakness(0-3 power)0

4-Restraining daily life activities

14 scores

Severe painslight painPainlessA-Turn over while lying012B-Standing012C-Washing012D-Sitting (1 Hour)012F-Lifting or holding object012G-Walking012H-Leaning forward012The age, sex, radiological and clinical diagnosis, surgical enterprise techniques, examination materials, operation notes of FBSS cases were analysed retrospectively

RESULTS

Of all the cases; 18 were females (51. 4%) and 17 were males (48. 6%). Ages ranged from 22 to 72 and the mean of ages was 49. The onset of symptoms of FBSS cases ranged from 15 days to 12 months (Average 6months). The result of this illustrated in table 1 were the causes of FBSS mostly due to recurrent disc herniation 68. 5% (24 cases) followed by epidural fibrosis 14. 2% (5cases) then lumbar stenosis 5. 7% (2 cases) and foraminal stenosis 5. 7% (2 cases) then Discitis + paraspinal abscess 2. 8% (1 case) and CSF fistula 2. 8%(1 case) were the least causes each had.

Table 2: the frequency distribution of cases by causes

Aetio pathology

n

%

Recurrent DH

2468. 5

Epidural Fibrosis

514. 2

Discitis +paraspinal abscess

12. 8

Lumbar stenosis

25. 7

Foraminal stenosis

25. 7

CSF Fistula

12. 8We analysed 35 cases in total that were operated because of FBSS. The 24 (68. 5%) were of recurrent DH, 5 (14. 2%) epidural fibrosis, 2 (5. 7%) lumbar stenosis, 2 (5. 7%) foraminal stenosis, 1(2. 8%) discitis and paraspinal abscess and 1(2. 8%) CSF fistula. Success rate according to the JOA scoring; was found as 40. 6% for the cases with epidural fibrosis. For the cases with recurrent DH the success rate was %76. 9. Statistical comparison was found as meaningful. ($p < 0.05$) (Table 3)

Table 3: The comparison of JOA scores

Recurrent DHEpidural fibrosisnJOA score

%

nJOA score

%

P valuePreoperative247. 876. 9511. 340. 6Student–t: p < 0.

05Postoperative2424. 1518, 7

Discussion

FBSS (failed back surgery syndrome) is mentioned on the condition that back surgery fails to meet expectations, objectives and aims of a patient before the operation. (6) However FBSS is accurately mentioned for the patients whose condition is worse than primer preoperation status, or who cannot reach better condition. Fritch and his friends re-operated 136 cases with FBSS after classic laminectomy and discectomy and they expressed that in those 136 cases in total; 62% were with recurrent DH; 23% different level DH, 12% instability, %5 fibrosis. (7) In our study, in 24 patients of all FBSS cases, recurrent DH was fixed as the reason of FBSS (68. 5%)Literature contains different views on definition of recurrent DH. Recurrent DH is expressed as the development of DH, on the same level, same part, or on the opposite part. (8-10)Some other researchers defined another level herniation as recurrent DH (disc herniation). (11)Epidural fibrosis is detected as the second FBSS cause (14. 2%) in our study. While the success rate of the cases with epidural fibrosis is 40. 6%, it is 76. 9% in the cases of recurrent DH without fibrosis. This fact points out that success rate is

decreasing in the cases that are operated after the fibrosis tissue occurred. On this account, in the radiological examination; the FBSS cases with noticeable epidural fibrosis formation must be well assessed prior to operation. In the analysis of Lumbar MRI with contrast fluid; the distinction between epidural fibrosis and recurrent DH is made about the rate 89%. Braveman and his friends reported that, in the cases they operated by reason of epidural fibrosis, the success rate was reported as 30-35%. It was also reported that they fixed bad result in 10- 20% of the cases. (12)After lumbar discectomy, different level epidural fibrosis developed in almost all cases. As wound healing happens fibrotic tissue occurs instead of epidural adipose tissue. (13) Many materials and procedures were developed in order to prevent fibrosis formation after lumbar discectomy. One of those methods is usage of free fatty graft. (14, 15) But the histological differences between epidural and subcutaneous adipose tissue lead to take dissatisfying results. (16, 17) In some studies it is stated that usage of minimal invasive surgery methods and, meticulous and very careful supplication of homeostasis decrease the formation of epidural fibrosis. (18)Foraminal stenosis is another FBSS reason that is found out in our study. 2 (5. 7%) of 35 cases were re-operated because of foraminal stenosis. In Burton and his friends' study, the foraminal stenosis rate was reported as 57-58% (18). In Waguespack and his friends' study this rate was reported as 29%. (19)Postoperative discitis and paraspinal abscess were detected as other reasons of FBSS. Infection was observed in 1 (2. 8%) of all cases in our series. staphylococcus aureus was produced bacteriologically in the two of the cases who have postoperative discitis and paraspinal abscess. Although postoperative discitis was reported

to be observed as 0-3% in different series prior MRI, it was reported that, this rate observed to be increased with the common usage of MRI.

Conclusion

Recurrent disc herniation and Epidural fibrosis are the most frequently observed reoperation cause in the patients. While the success rate of all failed back surgery syndrome cases is found as; 40. 6% for the patients with epidural fibrosis and 76. 9% are reported for the patients with Lumbar DH. The statistical comparison is found as meaningful of these success rates ($p < 0.05$). So according to the results the patients of FBSS with these two specific causes will get benefit from second operation as a treatment (disc herniation and epidural fibrosis). the other causes will not get benefit.

Recommendation

I recommend re-operating in patient with recurrent disc herniation as early as possible because it is the only way for pain relief. The cases with epidural fibrosis have to be well-assessed radiologically and clinically, and the best treatment plan should be aimed and formed. In order to prevent epidural fibrosis; minimal invasive surgery techniques have to be applied and careful homeostasis is to be supplied.