Lumbar Disc Herniation in Adolescents and Young Adults in Erbil Teaching Hospital: A clinical, Radiological and Surgical Study

Emad Kh. Hammood (MBChB, FICMS)[1]

Abstract

Background: Degenerative changes in the intervertebral disc begin at the late teens and early adult life, after the completion of the physical growth and development. Lumbar disc herniation is rare in children and adolescents. The clinical presentation and etiology of lumber disc herniation may differ from that in adults.

Objective: To determine the rate of lumber disc herniation among adolescents and to describe the radiological, clinical features and surgical outcomes of lumber disc herniation in a group of adolescent and young adult patients.

Patients and Methods: A retrospective revision of 1045 cases of lumbar disc excisions performed at the neurosurgical unit of Erbil teaching hospital between 2001 and 2015 was done. In all cases, the diagnosis was achieved pre-operatively by lumbar spine MRI with or without CT scan. Initially all patients were treated conservatively for more than 3 months without success. The indications for surgery were failure of conservative treatment, intractable pain and/or progressive neurological impairment. Surgical posterior discectomy with fenestration or partial laminectomy or hemi-laminectomy was performed. On the day of discharge Kirkaldy-Willis criteria was used to assess the patient post-operatively.

Results: Thirteen (1.22%) of the 1045 patients were adolescents and young adults between 13 and 21 years of age with a male: female ratio of 1.16: 1. Nearly 70 % of patients had a history of trauma. Lumbar back pain and radicular sciatica were the main complaints in 77% of the patients. Two patients had radicular leg pain. Only one patient of the 13 patients experienced lumbar back pain without leg pain. Only one patient was found to have neurological deficit with partial foot drop. Prior to surgical intervention, straight leg raising test was positive in all 13 patients. All of the patients had symptoms duration for more than 3 months. The radiological and surgical findings revealed a protruding disc in eleven cases, one lateral recess stenosis and one lumbar synovial cyst. Epiphyseal ring fracture was found in 4 of the 5 patients who underwent CT study. Results of Kirkaldy-Willis criteria were excellent or good in 92 % of patients. The follow-up period ranged from 4 months to 2 years with an average of 14 months.

Conclusion: Young adults and adolescents disc herniation is uncommon and is often precipitated by trauma. Surgical treatment of such patients relieves clinical symptoms quickly and is associated with good and excellent results in nearly all patients.

Key words: Lumber disc herniation, Lumber back pain, Sciatica, Adolescents, Kirkaldy-Willis criteria.

Corresponding Author: emadhammood@yahoo.com.

Received: 18th April 2017
Accepted: 4th June 2017

[1] Neurosurgery Unit, Department of Surgery - College of Medicine - Hawler Medical University - Erbil-Iraq.