

Dural Tear- A Feared Complication of Spine Surgery

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ABSTRACT

The number and complexity of spinal procedure is increasing every year leading to a greater incidence of Dural Tears (DT) which may cause severe consequences. From different study it is evident that patients with DT had higher complications than non-DT group in spine surgery. Aim of the study is to evaluate the incidence of DT during different types of lumbar surgical procedure with risk factors, to compare between DT and non-DT group with early and late outcome. This is a prospective study of 430 consecutive patients with different types of lumbar spine surgery within the period of 2010 to 2018. In all cases, Surgeon filled up a protocol to record information as age, sex, body mass index (BMI), previous lumbar spine surgery, length of surgery, drainage and postoperative follow up. In cases where durotomy had occurred additional information as when DT occurred, what instrument was in use, whether resident or surgeon caused the tear, were recorded. Dural Tear closure was achieved by application of suture with autologous fat graft and reinforced with gelatin. The postoperative results among the patients with or without DT were evaluated. VAS and ODI Scales were used for the evaluation of all Patients. In our study incidence of DT is 6.51%. Spinal Stenosis, spondylolisthesis, reoperative multilevel, instrumented surgery and advanced age posed higher incidence of DT. Post-operative complications were also more in DT group. Expected complications of Dural tear include CSF leakage leading to pseudomeningocele, dura-cutaneous fistula, meningitis, abscess, wound dehiscence, headache or reoperation. In DT group we encountered one case of CSF leakage and Dura cutaneous fistula in addition to other complications of spinal surgery. Mean improvement in VAS score and ODI score at 12 weeks follow up are higher in non-DT group. Every spine surgeon must be aware of Dural tear specially in high-risk group and must know how to deal with these complications of spine surgery to avoid poor outcome of patients.

Keywords: Dural tear, Spine surgery complications, VAS score, ODI score

Abbreviations

DT: Dural Tear; VAS: Visual Analogue Scale; ODI: Oswestry Disability Index

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