

Postoperative Spinal Epidural Hematoma Risk Factors

Pre-operative aspirin is associated with an increased risk of [spinal epidural hematoma](#) (SEH), even when appropriately discontinued. Appropriately dosed post-operative anticoagulation does not increase the risk of SEH, though being on multiple agents trends toward statistical significance and should be better studied. Surgeons should be vigilant and carefully monitor patients on pre-operative antiplatelet medications for spinal epidural hematoma ¹⁾.

The low incidence of spinal epidural hematoma after anticoagulation treatment means this condition is not recognized timely, and it is misdiagnosed easily. Clinicians should consider this condition when patients treated with anticoagulants have neurological deficits below a spinal segmental plane ²⁾.

Hernandez et al. found a 2.3% incidence of post-operative quadriparesis with no obvious risk factors predisposing patients to this adverse outcome ³⁾.

Despite the fact that multiple large studies have been performed attempting to identify risk factors for this complication, there is still significant debate about the effect of subfascial drains, postoperative anticoagulation, and antiplatelet medication on the incidence of postoperative hematoma ⁴⁾.

Kou et al. identified multilevel procedures and the presence of preoperative coagulopathy as possible significant risk factors ⁵⁾.

Awad et al. divided potential risk factors into two categories, preoperative and intraoperative factors. Significant preoperative risk factors included nonsteroidal antiinflammatory use and patient age more than 60 years; significant intraoperative risk factors included multiple-level operation, anemia, and large blood loss ⁶⁾.

Sokolowski et al. reported that age greater than 60 years, multilevel procedures, and preoperative international normalized ratio (INR) correlated with postoperative hematoma volumes. Even though our patient indeed had several recognized risk factors—age more than 60 years, use of analgesic agents, and multilevel surgery—he had no neurological symptoms during his hospitalization. This would imply the nonexistence of an epidural hematoma during the early postoperative period ⁷⁾.

Parthibian and Majeed described one such case which developed following an episode of violent twisting movement ⁸⁾.

1)

Saitta BH, Shultz P, Hanson K, Mikhael MM. Post-Operative Spinal Epidural Hematoma: Are We Discontinuing Aspirin Early Enough? *Global Spine J.* 2022 Mar 5:21925682221079259. doi: 10.1177/21925682221079259. Epub ahead of print. PMID: 35253459.

2)

Li X, Zeng Z, Yang Y, Ding W, Wang L, Xu Y, Yang W, Bi W. Warfarin-related epidural hematoma: a case report. *J Int Med Res*. 2022 Mar;50(3):3000605221082891. doi: 10.1177/03000605221082891. PMID: 35317631; PMCID: PMC8949737.

3)

Hernandez NS, Wang AY, George K, Singh G, Yang MJ, Kryzanski JT, Riesenburger RI. Post-operative quadriparesis following posterior cervical laminectomy and fusion: A case-series of incidence, risk factors, and management. *Clin Neurol Neurosurg*. 2022 Feb;213:107124. doi: 10.1016/j.clineuro.2022.107124. Epub 2022 Jan 10. PMID: 35033792.

4)

Schroeder GD, Kurd MF, Kepler CK, Arnold PM, Vaccaro AR. Postoperative Epidural Hematomas in the Lumbar Spine. *J Spinal Disord Tech*. 2015 Nov;28(9):313-318. PubMed PMID: 26484502.

5)

Kou J, Fischgrund J, Biddinger A, Herkowitz H. Risk factors for spinal epidural hematoma after spinal surgery. *Spine*. 2002;27(15):1670-1673.

6)

Awad JN, Kebaish KM, Donigan J, Cohen DB, Kostuik JP. Analysis of the risk factors for the development of post-operative spinal epidural haematoma. *Journal of Bone and Joint Surgery B*. 2005;87(9):1248-1252.

7)

Sokolowski MJ, Garvey TA, Perl J, et al. Prospective study of postoperative lumbar epidural hematoma: incidence and risk factors. *Spine*. 2008;33(1):108-113.

8)

Parthiban CJ, Majeed SA. Delayed spinal extradural hematoma following thoracic spine surgery and resulting in paraplegia: a case report. *Journal of Medical Case Reports*. 2008;2, article 141

From:

<https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**

Permanent link:

https://neurosurgerywiki.com/wiki/doku.php?id=postoperative_spinal_epidural_hematoma_risk_factors

Last update: **2024/06/07 02:56**

