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Thoracolumbar Spine Surgery Risk Factors for Post-operative Gout Flares

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Introduction

The most prevalent type of inflammatory arthritis, gouty arthritis, typically flares up following operations. However, there is little information available regarding gout flares following spinal surgeries. Such flares prevent early patient movement and prolong hospital stays. 128 patients with a history of gouty arthritis were included in this study, which examined a database of 6439 adult patients who underwent thoracolumbar spine surgery between January 2009 and June 2021. The baseline features and operational specifics of the flare-up and no-flare groups were compared. In order to identify factors and create a predictive model of postoperative flares, multivariate logistic regression was performed [1].

Description

The most prevalent type of inflammatory arthritis, with a prevalence range of 2.49–6.24% worldwide, is gouty arthritis. Admission to a hospital and receiving surgical care are both recognized risk factors for gouty arthritis acute flare-ups. Longer hospital stays and higher medical costs are caused by these flares. These flares prevent early patient mobilization in the postoperative period. Therefore, it is important to identify patients with known risk factors and provide them with the best medical care possible before surgery. Patients with a history of gouty arthritis had an immediate postoperative flare-up rate that ranges from 17.2% to 44.3%. Starvation, volume depletion and tissue hypoxia are among the conditions that could cause a gout flare after surgery [2].

The spine treatments were among the most difficult types of orthopedic surgery, with comparatively higher blood loss and a longer surgical time. In our clinical experience, patients with a history of gouty arthritis typically develop postsurgical gout flares following thoracolumbar spine surgeries. But there haven't been many reports of the precise flare rate. It is uncertain whether risk factors for spinal procedures are similar to those for general surgeries. Decompression, instrumentation and fusion of the spine all need various amounts of drilling, burring, curettage and bone resection. Also unknown is the relationship between the scope of surgery and the risk of a gout flare [3].

A single medical center's database of patients was used for this retrospective analysis, which covered the period from June 2009 to June 2021. Consecutive individuals underwent thoracolumbar spine surgery under general anesthesia for degenerative etiologies and met the database inclusion criteria; there were 6439 patients in the database. Additional requirements related to the current trial included a history of gouty arthritis documented by the registry of the International Classification of Disease, Tenth Revision, Clinical Modification and a minimum of 30 days' follow-up. Surgery for infectious spondylodiscitis, acute high-energy trauma, or malignant metastases was not an option for any of the patients. Additionally excluded were patients who had gout flare-ups prior to surgery [4].

A total of 132 people had a history of gourthy arthritis within the database of 6449 people (prevalence, 1.9%). After excluding patients who had surgery for high-energy trauma or malignant metastasis or who had flare-ups before surgery, 128 people were finally enrolled in the trial. In total, 102 men and 26 women (average age, 65.0 years) were included [5].

Conclusion

The flare-up rates of gouty arthritis following spinal surgery ranged between 17.2 and 44.3%, which was comparable with the 42.1% flare-up rate in this study. Previous studies have shown that patients undergoing general surgery had an increased risk of developing acute gout attacks compared with those who underwent orthopedic surgery. However, no significant differences were found in the incidence of gout flares among patients undergoing various types of spine surgery. Furthermore, we did not find any association between gout flares and patient characteristics such as age, sex, body mass index, preoperative diuretics use, comorbidities and operation duration.

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