

Rationale of Revision Lumbar Spine Surgery

Hossein Elgafy¹, Alexander R. Vaccaro², Jens R. Chapman³, Marcel F. Dvorak⁴

- ¹Department of Orthopaedics, University of Toledo Medical Center, Toledo, Ohio
- ²Department of Orthopaedics, Thomas Jefferson University and the Rothman Institute, Philadelphia, Pennsylvania
- ³Department of Orthopaedics, University of Washington School of Medicine, Seattle, Washington
- ⁴Department of Orthopaedics, University of British Columbia, Vancouver, Canada

Abstract

Revision lumbar spine surgeries are technically challenging with inconstant outcome results. This article discusses the preoperative, intraoperative, as well as postoperative management in these difficult patients. Successful intervention requires a detailed history and physical examination and carefully chosen diagnostic tests. Preoperative planning is paramount in these cases. The decision-making process should address the timing of the surgery, surgical approach, level of interbody fusion required, correction of sagittal imbalance, type of osteotomy, location of the osteotomy, and the end of the construct. Surgeons should be prepared to manage associated complications such as dural tear and massive blood loss. The use of autograft and/or biologic graft is necessary to help in achieving a successful fusion. Postoperative management includes prophylactic antibiotic, anticoagulation, nutritional support, and brace.

Keywords

revision - lumbar spine - preoperative evaluation - intraoperative strategies - postoperative management

翻修腰椎手術的基本原理

翻修腰椎手術在技術上具有挑戰性的與不定的結果。本文討論了對這些困難的患者於手術前，手術中及手術後的管理。成功的手術需要詳細的病歷及體格檢查和小心選擇的診斷方法。在這種情況下，手術前計劃是最重要的。在決策過程中應考慮到手術的時間，手術方式，需要椎體間融合的節段，矯正失衡的矢狀面，截骨術的種類，截骨的位置和結構終結

的位置。外科醫生應做好準備處至相關的併發症，如硬腦膜撕裂和大量失血。使用自體移植和/或生物移植植物是有助於達至成功融合。手術後管理包括預防性應用抗生素，抗凝血劑，營養輔助和支架。