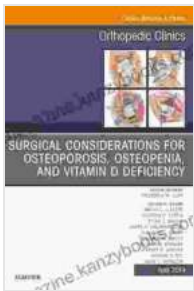


Surgical Considerations for Osteoporosis, Osteopenia, and Vitamin Deficiency

Osteoporosis and osteopenia are conditions characterized by reduced bone density and increased risk of fractures. Vitamin deficiency, particularly vitamin D and calcium, can also contribute to bone fragility. Patients with these conditions require special attention in the perioperative period to minimize the risk of complications.



Surgical Considerations for Osteoporosis, Osteopenia, and Vitamin D Deficiency, An Issue of Orthopedic Clinics (The Clinics: Orthopedics Book 50)

by Pedro Gea Martinez

★★★★★ 5 out of 5

Language : English
File size : 32440 KB
Text-to-Speech : Enabled
Screen Reader : Supported
Enhanced typesetting : Enabled
Print length : 390 pages



Preoperative Evaluation

Preoperative evaluation should include a thorough history and physical examination to assess the patient's risk factors for osteoporosis, osteopenia, or vitamin deficiency. This includes:

- Age (over 50 years)

- Sex (postmenopausal women)
- Race (Caucasian, Asian)
- Family history of osteoporosis
- Lifestyle factors (smoking, excessive alcohol consumption)
- Medical history (diabetes, rheumatoid arthritis)
- Medications (corticosteroids, bisphosphonates)

Bone mineral density (BMD) testing may be indicated to confirm the diagnosis of osteoporosis or osteopenia. Vitamin D and calcium levels should also be checked.

Preoperative Management

Preoperative management aims to optimize bone health and reduce the risk of fractures. This may include:

- Calcium and vitamin D supplementation
- Bisphosphonates or denosumab to increase BMD
- Weight-bearing exercise
- Smoking cessation
- Fall prevention measures

Intraoperative Considerations

Intraoperatively, gentle handling of bones is essential to avoid fractures. The use of sharp instruments and power tools should be minimized. Care should be taken to place implants in areas with good bone quality.

Postoperative Care

Postoperative care includes continuation of preoperative medications and lifestyle modifications. Patients may require early mobilization to promote bone healing and prevent stiffness. Falls should be avoided during the healing period.

Management of Periprosthetic Fractures

Periprosthetic fractures occur around implanted devices and are a potential complication in patients with osteoporosis or osteopenia. Management involves:

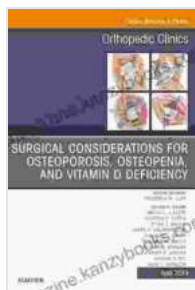
- Removal of the implant
- Bone grafting to improve bone quality
- Revision surgery with a larger or longer implant
- Medical management with bisphosphonates or denosumab

Surgical management of patients with osteoporosis, osteopenia, or vitamin deficiency requires careful preoperative evaluation, optimization of bone health, and meticulous intraoperative and postoperative care. By following these principles, surgeons can minimize the risk of complications and improve patient outcomes.

References

- Preoperative Evaluation and Management of Osteoporosis for Orthopedic Surgery
- Surgical Considerations in Patients with Osteoporosis and Osteopenia

- Periprosthetic Fractures in Patients with Osteoporosis



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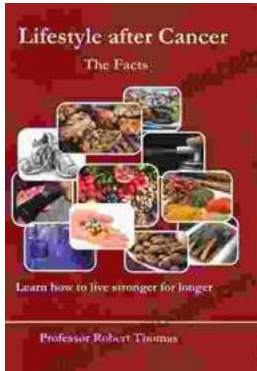
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