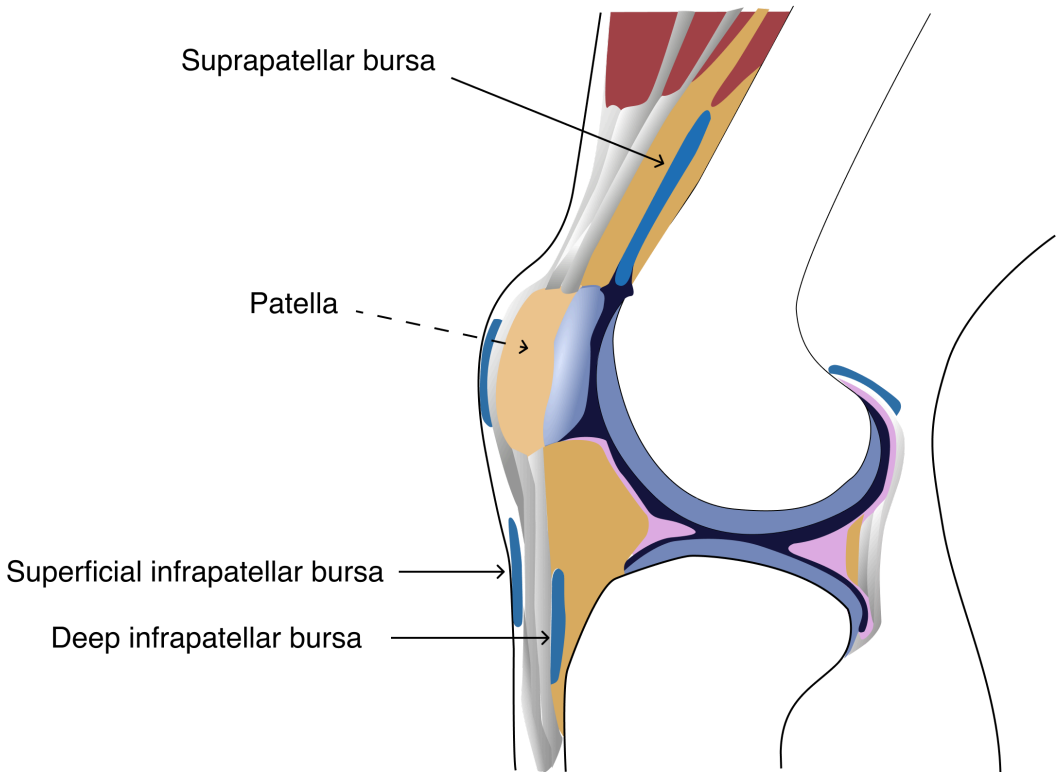
Infrapatellar Bursitis Treatment Guidelines

What is infrapatellar bursitis?

Infrapatellar bursitis refers to inflammation of the infrapatellar bursa, a fluid-filled sac located below the patella that reduces friction and facilitates smooth tissue movement. The infrapatellar bursa consists of two distinct parts: the superficial infrapatellar bursa, situated between the tibial tubercle and the overlying skin, and the deep infrapatellar bursa, located between the posterior aspect of the patellar tendon and the tibia (Chatra, 2012). These bursae are essential for normal knee mechanics, particularly during activities involving repetitive flexion and extension.

Bursitis results from repetitive trauma, infection, overuse, or systemic conditions. Infrapatellar bursitis is often linked to prolonged kneeling, common in professions like clergy or gardening (Jain et al., 2021). Symptoms include swelling, tenderness, and restricted knee mobility, with chronic cases potentially causing calcification or lumps that hinder the bursa's function.

Septic bursitis, a more severe form of infrapatellar bursitis caused by bacterial infection, presents with additional symptoms such as redness, warmth, fever, and discharge. Prompt treatment is crucial to prevent complications like abscess formation or systemic infection.



Management of infrapatellar bursitis

Non-surgical treatment

For most cases of aseptic (non-septic) bursitis, conservative management is effective. Resting the affected knee and avoiding activities that exacerbate symptoms are crucial first steps. Cold therapy, such as applying ice packs for 15–20 minutes multiple times daily, helps to reduce inflammation and alleviate pain. Compression using an elastic bandage and elevating the leg above heart level can further decrease swelling.

Non-steroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen or naproxen, are commonly prescribed for pain and inflammation relief. In cases where swelling persists, aspiration of the bursal fluid under sterile conditions may be performed. This procedure also allows for laboratory analysis to rule out infection. Physical therapy, including gentle range-of-motion and strengthening exercises, is essential during recovery to restore knee function and prevent recurrence.

If inflammation persists despite these measures, corticosteroid injections can be administered directly into the bursa. These injections are effective in reducing inflammation but should be used cautiously to avoid adverse effects, such as tissue weakening with repeated use.

Management of septic bursitis

Septic bursitis requires a more aggressive approach. Empiric antibiotic therapy should be initiated promptly, with adjustments based on bacterial culture results. In some cases, surgical drainage or excision of the infected bursa may be necessary, particularly if the infection is extensive or fails to respond to antibiotics (Chatra, 2012).

Surgical options

Surgical intervention is reserved for cases that are refractory to non-surgical treatments or involve complications such as calcified or recurrent bursae. The most common procedure is bursal excision, which can be performed either through open surgery or endoscopic techniques. Depending on the complexity, the procedure may be completed in one or two stages (Abdelghany et al., 2023). Following surgery, physical therapy is vital to restore mobility and prevent stiffness. Gradual resumption of weight-bearing activities ensures optimal recovery.

Preventive strategies

Preventing infrapatellar bursitis involves minimizing repetitive trauma and adopting protective measures. Individuals whose activities require prolonged kneeling should use padded knee guards or cushioning to protect the infrapatellar bursa.

Ergonomic modifications to workstations and activities can also reduce strain on the knees. Strengthening exercises for the quadriceps and hamstrings improve knee stability and reduce stress on the bursa.

Education about proper knee mechanics and early symptom recognition can help prevent progression to chronic bursitis.

Additional notes

References

Abdelghany, M., Abdelrazak, A., Raafat, M., & Fattouh, E. (2023). An unusually massive hemorrhagic superficial infrapatellar bursa excised in a one-stage procedure: Case report. *Journal of Orthopaedic Case Reports*, 13(8), 142–146. https://doi.org/10.13107/jocr.2023.v13.i08.3850

Chatra, P. S. (2012). Bursae around the knee joints. *Indian Journal of Radiology and Imaging*, 22(1), 27–30. https://doi.org/10.4103/0971-3026.95400

Jain, M., Nayak, M., Ansari, S., & Patro, B. P. (2021). Infrapatellar bursitis presenting as a lump. *BMJ Case Reports*, 14(5), e243581. https://doi.org/10.1136/bcr-2021-243581

Knee Pain Explained. (n.d.). *Infrapatellar bursitis: Causes, symptoms & treatment*. Retrieved November 26, 2024, from https://www.knee-pain-explained.com/infrapatellar-bursitis.html