Meniscal cysts are rare and usually asymptomatic. They may cause various symptoms depending on their size and site of origin. It may present as a palpable mass with or without pain and sometimes grows large enough to limit the patient's activities of daily living. We report a rare case where both intrameniscal and parameniscal cyst were present in the same meniscus. The magnetic resonance imaging is the gold standard for diagnosis. We treated the intrameniscal cyst by arthroscopic decompression and debridement and the parameniscal cyst by a combination of arthroscopic and open procedure. The outcome of the treatment was good. The patient had no recurrence and was able to return to his full functional status.

Keywords: Intrameniscal, parameniscal, cyst, arthroscopic.
confirming the diagnosis. Postoperatively, the patient was reviewed at 3 weeks, 3 months, and 6 months interval. He had no recurrence of signs and symptoms and was able to return to full function.

Discussion
The etiopathology of meniscal cysts remains controversial. Originally, it was thought that they are related to a mucoid transformation of connective tissue into gelatinous substance that gets deposited in the meniscus [12]. Chronic infections, trauma causing hemorrhages, accumulation of mesenchymal cells secreting mucopolysaccharides, or arthritic lesions have also been postulated as causative agents by some authors [3, 6, 13, 14]. Nevertheless, the most accepted theory of its origin is related to a meniscal tear, leading to extrusion of synovial fluid forming a collection in the adjacent parameniscal soft tissue and a one-way check valve preventing the reflux of the fluid from the cyst back in the joint [10, 6]. The diagnosis of a meniscal cyst is established through a thorough history and relevant clinical examination backed by good diagnostic imaging. Patients with a meniscal cyst will typically report symptoms of focal knee pain and swelling along the joint line. Associated meniscal tear or stretching of the soft tissues near the joint may be the reason for pain in these patients. Due to its association with meniscal cysts, symptoms of a meniscus tear such as popping, joint stiffness, and locking may also be present. These patients may also have a palpable mass along the joint line. Parameniscal cysts of the lateral meniscus are more commonly palpable compared to parameniscal cysts of the medial meniscus [8]. Even though there are no “special tests” to specifically evaluate meniscal cysts, physical examination maneuvers to evaluate meniscal tears may be used due to the association of parameniscal cysts with meniscal tears. MRI is typically considered the “gold standard” for a suspected meniscal cyst due to its ability to delineate the cyst and assess the menisci [13]. High-frequency and high-resolution ultrasound machines also have a good accuracy in diagnosing meniscal cysts and also provide a possibility of its image-guided aspiration [15]. The increased understanding of the meniscal cysts etiopathology led to progression of surgical treatment from aspiration alone to combination with open meniscectomy to most recently, arthroscopic meniscectomy and cyst decompression [3]. A recurrence rate of >80% is reported with cyst excision alone compared to 0–9.5% recurrence rate in arthroscopic excision [3]. Intrameniscal cysts can effectively be treated by arthroscopic decompression and debridement of the damaged meniscus. Parameniscal cyst may present a dilemma, whether to preserve the meniscus and approach the cyst from outside or approach the cyst arthroscopically and eliminate the check valve along with debridement of the damaged meniscus. In this situation, size and location of the cyst determine the treatment. In cysts, which are larger than the height of the meniscus, extra-articular drainage is additionally recommended. In the extra-articular drainage, scraping the walls of the cyst, while inspecting with an arthroscope, reduces the chance of a recurrence of the cyst. In the cysts, which do not open into the joint cavity or have very limited connection with the joint on the most peripheral region of meniscus, extra-articular drainage of the cyst without meniscectomy might reduce unnecessary meniscal loss without increasing the risk of recurrence [2, 3, 16, 17, 18, 19, 20].
Our case was unique because it is the first case reported in literature where there was simultaneous occurrence of separate intra- and para-meniscal cyst in the same meniscus. We treated the intrameniscal cyst by arthroscopic decompression and debridement and the parameniscal cyst by a combination of arthroscopic and open procedure. The outcome of the treatment was good. The patient had no recurrence and was able to return to his full functional status.

References


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