

Summary

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Intra-articular ganglion cysts of the knee joint are rare and mostly incidental finding in MRI and arthroscopy (3, 4, 5). Anatomy and biomechanics of the knee joint are reviewed. The exact etiology of the ganglion cysts is unknown (12, 77). However, several theories can explain their pathogenesis like : traumatic, degenerative, developmental and articular theories (88, 117, 120, 127). Intra-articular ganglion cysts of the knee can be detected in various locations as : cruciate ligaments (12, 16), menisci (62, 146), parameniscal (113, 165), infrapatellar fat pad (166, 167), alar folds (168), intercondylar notch (169, 170), medial plica (12), anterior menisofemoral ligament of Humphery (172), ligamentum mucosum (75), popliteus tendon (6, 171), articular capsule (173, 186), posterior septum of the knee (40) and stubs of ruptured ligaments (15, 108). Most of the cysts are solitary and more common in men with the third and fourth decades (95, 174). However lateral meniscal cysts are more common in women (3:1) They are cystic structures with fibrous capsule, having smooth or lobulated surface, round or fusiform in shape (14, 95, 114). Each cyst contains a cavity filled with fluid sometimes showing internal septations, with different sizes ranging from 0.5cm to 12cm (91, 94, 173, 177). Histological examination shows connective tissue capsule with fibrocytes lining the cavities and areas of myxoid degeneration (176, 183).

Most of the intra-articular ganglion cysts are asymptomatic (10, 66, 78), while others are clinically manifested by : knee pain, restriction of movements, giving way, swelling, locking, effusion, clicking, stiffness, tenderness, palpable masses, instability and limping. Some ganglia communicate with the knee joint (75, 93, 107, 114, 139, 170, 190, 191).

They can be diagnosed by a variety of radiographic techniques including arthrography, sonography, CT and MRI (1, 24). MRI is the

method of choice for the diagnosis as it is the most sensitive, accurate and specific method and arthroscopy confirmed the diagnosis (193, 197). These cysts must be differentiated from a diverse group of pathological entities (204). Symptomatic cysts needed treatment in all cases (12). A variety of treatment modalities have been employed such as : conservative treatment, arthroscopic needle – guided aspiration and debridement, arthroscopic resection and surgical excision (77, 140, 213, 216).

Some ganglion cysts cause knee damage such as : bone & cartilage erosions, chondromalacia (12), meniscal tears (156), synovitis (169), nerve lesion (220), capsule penetration (24), osteoarthritis (192) & bone marrow edema (78).

No recurrence after their management in many cases (218). But in other cases the recurrence rate ranges from 1-34% (89, 94). All the patients are free of symptoms after postoperative recovery and follow – up of 6 months to 3 years (66, 118).