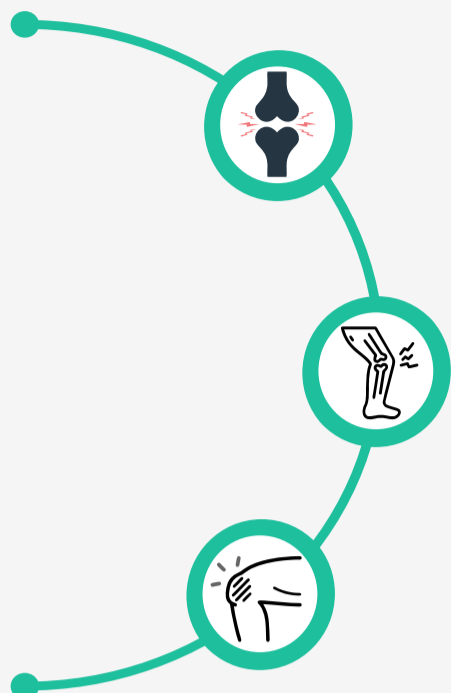




Standard Treatment Workflow (STW) OSTEOARTHRITIS OF KNEE JOINT

ICD-10-M19. 9



SYMPTOMS

- Pain that increases with activity & relieves with rest
- Joint stiffness especially in the morning or after a period of rest for short duration
- Decrease in Range of Motion (ROM) of the knee, making it difficult to stand from sitting position, get in and out of chair or car, stair climbing, or walk
- Creaking, crackling sounds on movement of knee
- Swelling and feeling of warmth in the joint may be present

SIGNS

- Joint line tenderness
- Patello-femoral crepitus
- Decreased ROM
- Deformity (commonly flexion and varus)
- Joint effusion and synovial thickening may be present

INVESTIGATION

- X-rays
- Bilateral Knee - AP (standing) and lateral views

MANAGEMENT

KELLGREN AND LAWRENCE (RADIOLOGICAL) CLASSIFICATION OSTEOARTHRITIS OF KNEE

Classification

- **Grade 0:** No radiographic features of OA are present
- **Grade 1:** Doubtful Joint Space Narrowing (JSN) and possible osteophytic lipping
- **Grade 2:** Definite osteophytes and possible JSN on anteroposterior weight-bearing radiograph
- **Grade 3:** Multiple osteophytes, definite JSN, sclerosis, possible bony deformity
- **Grade 4:** Large osteophytes, marked JSN, severe sclerosis and definite bony deformity

- High tibial osteotomy may be considered in younger patients with significant varus deformity

Indications of surgery for total knee replacement

- Patients with osteoarthritis Kellgren and Lawrence grade 4 with following features may require surgery after appropriate conservative treatment has failed
- Severe knee pain or stiffness that limits activities of daily living including walking, climbing stairs, and getting in and out of chairs
 - Patient unable to walk short distances (due to significant knee pain) and requires use of a cane/walker
 - Regular analgesic requirement over a long period
 - Moderate or severe knee pain while on rest either day or night
 - Severe deformity

CONSERVATIVE TREATMENT

- Topical NSAIDs
- Oral Acetaminophen
- Oral NSAIDs (If not contraindicated) as and when required
- Quadriceps strengthening and Hamstring stretching exercises
- Lifestyle modifications such as avoid cross legged sitting and squatting and stair climbing wherever possible
- Weight loss

CONTRAINDICATIONS FOR KNEE REPLACEMENT

- Recent or current knee sepsis
- Remote source of ongoing infection
- Extensor mechanism discontinuity or severe dysfunction
- Recurvatum deformity secondary to neuromuscular weakness
- Presence of a painless, well-functioning knee arthrodesis

Grade 0
No OA

Grade 1
Doubtful OA

Grade 2
Mild OA

Grade 3
Moderate OA

Grade 4
Severe OA



No Osteophytes
No JSN

Possible Osteophytes
Doubtful JSN

Definite Osteophytes
Possible JSN

Moderate Osteophytes
Definite JSN

Large osteophytes
Great JSN

ABBREVIATIONS

AP: Antero-posterior

NSAIDs: Non-steroidal Anti-inflammatory Drugs

OA: Osteoarthritis

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KEEP A HIGH THRESHOLD FOR INVASIVE PROCEDURES

This STW has been prepared by national experts of India with feasibility considerations for various levels of healthcare system in the country. These broad guidelines are advisory, and are based on expert opinions and available scientific evidence. There may be variations in the management of an individual patient based on his/her specific condition, as decided by the treating physician. There will be no indemnity for direct or indirect consequences. Kindly visit the website of ICMR for more information: (icmr.gov.in) for more information. ©Indian Council of Medical Research, Ministry of Health & Family Welfare, Government of India.