



## Case Report on Management and Complication of Deformity (Locked Knee) Pseudo Knee

\* *Ms. Seema Kolhe<sup>1</sup>, Mrs. Akhtaribano Sayyad (Sheikh)<sup>2</sup>, Mrs. Pratibha wankhede<sup>3</sup>*

<sup>1</sup>Nursing Tutor, Shalinitai Meghe College of Nursing, Datta Meghe Institute of Higher Education and Research, Sawangi (M) Wardha, Maharashtra, India, [seemasanvi1234@gmail.com](mailto:seemasanvi1234@gmail.com) Mobile NO: 8975305631

<sup>2</sup>Principal of Shalinitai Meghe College of Nursing, Datta Meghe Institute of Higher Education and Research, Sawangi(M) Wardha, Maharashtra, India, Email: - [Akhtaribano18@gmail.com](mailto:Akhtaribano18@gmail.com)

<sup>3</sup>Assistant Professor, Community Health Nursing Dept, Shalinitai Meghe College of Nursing, Datta Meghe Institute of Higher Education and Research, Sawangi(M) Wardha, Maharashtra, India, Email: - [pratibhawankhede22@gmail.com](mailto:pratibhawankhede22@gmail.com)

### ABSTRACT:

Introduction:- A "locked knee" is incapable of being bent or straightened. It can be an extremely painful condition that affects not just the knee's range of motion, or how far the joint can move, but also your comfort when standing up, stepping up, or even sitting down. A truly locked knee refers to a knee that is mechanically incapable of bending or straightening. when a knee appears to be "locked," **Present complaints and Investigation:-** the patient was apparently alright 1.5 years ago when his family noticed that the patient is not able to sit folded leg not able to sit for toilet not associated with pain or swelling patient used to cry when his family used to massage his right knee. complaints of the patient, Locked knee, and several possible inability to bend and Pain difficulty straightening the leg, bruising, and swelling to alleviate discomfort difficulty walking or running, knee instability patient is admitted to the ortho ward at the age of 2 years The patient's medical and family history, any existing conditions, and current state of health will all be reviewed by an orthopedic specialist. The legs and gait will also be physically examined. MRI or standing-alignment X-ray The doctor can pinpoint the exact location and mechanical axis of the deformity with the help of these radiological images of the leg taken from the hip to the ankle. and more research. **Past History:** The patient went to a local hospital where the patient was managed with oral medication and referred to a higher center Patient was not admitted And was not Operated. The primary diagnosis, therapeutic intervention, and outcomes: After physical examination and investigation deformity knee locked knee. **Conclusions:** The technique presented combines a measured-resection technique with individual knee manipulation decreased GA and SOS mini quadriceps release Operation.

**Keywords:-** Deformity, Knock, Knee, Quadriceps, locked knee, Pseudo knee.

### Introduction and background:

Even when complete knee replacement reduces discomfort and restores the knee's functional range of motion, quadriceps weakness and diminished functional capacity are typically still present a year later. The current study set out to identify how muscle atrophy and failure to activate muscles voluntarily played an involvement in the quadriceps' early loss of strength after surgery. severe individual knee manipulation decreased GA and SOS mini quadriceps release Operation. right knee.1 The youngster had pain, limited range of motion, and frequent locking and instability in his right knee. The patient's locked knee deformity was successfully corrected by hemiepiphyodesis (guided growth treatment) of the right knee joint, which improved knee stability. The patient was able to completely engage in athletic activities with peers without experiencing any side effects, sparing her from needing a major ligament replacement of the knee to treat the locked knee. One of the human body's most intricate joints is the knee. It also includes the knee cap (patella) and a smaller bone called the fibula, which is situated close to the tibia. It joins the thigh bone (femur) to the shin bone (tibia). Ligaments bind the knee bones together and provide stability, while tendon connects these bones to the muscles of the leg. Furthermore, the medial and lateral menisci, two C-shaped segments of cartilage, serve as a cushion between the tibia and femur, thus functioning as shock absorbers. Knees are made to rotate slightly and bend up and down. The inability of a knee to carry out these tasks affects one's range of motion and capacity to carry out daily tasks like sitting, standing, squatting, and kneeling. A knee is referred to as locked when it is incapable of being bent or straightened. Two varieties of locked knees exist. When the knee joint is genuinely locked into position and is immobile, it is said to have a true locked knee. When pain prevents the knee joint from moving freely, a pseudo locked knee results.2

### Patient information:

the patient was apparently alright 1.5 years ago when his family noticed that the patient is not able to sit folded leg and not able to sit on the toilet not associated with pain or swelling patient used to cry when his family used to massage his right knee. complaints of the patient, Locked knee, and several

possible inability to bend and Pain difficulty straightening the leg, bruising, and swelling to alleviate discomfort difficulty walking or running, knee instability patient is admitted to the ortho ward at the age of 2 years The patient's medical and family history, any existing conditions, and current state of health will all be reviewed by an orthopedic specialist.



**Figure 1: X-ray of the patient**

**The primary concern and symptoms of the patient. :-** The patient was Admitted to the female ORTHO ward with complaints of a patient is not able to sit folded leg and not able to sit on the toilet not associated with pain or swelling patient used to cry when his family used to massage his right knee. Complaints of a patient, Locked knee, and several others are possible inability to bend and Pain difficulty straightening the leg, bruising, and swelling alleviate discomfort difficulty walking or running, knee instability

**Medical and family and psycho-social history:-** a person who has a locked knee for six months of the year. The present illustration comes from a middle-class nuclear family. She was mentally sound. He was the date-, time-, and place-oriented person who maintained positive relationships with family members.

**Relevant past intervention with outcomes:-** History of deformity locked knee back 1.5 years. He underwent treatment for the condition for which he spent ten days in the hospital, and his outcomes were favorable.

**Physical examination and clinical findings:-** The patient is 90 cm tall, has a slim body, and is 13 kg overweight. Her vital signs are normal, and he had a tachycardia of 100 beats per minute and great peripheral perfusion. If your blood pressure is 116/76 mm Hg, you are in good health. He was sensitive to pain on both sides and only responded to it neurologically. To undergo closer monitoring, admission to a critical care unit is required. When it becomes icy cold.

**Timeline:-** The patient's primary concern was addressed during their visit to the hospital's Ortho department a patient is not able to sit on folded legs not able to sit in the toilet not associated with pain or swelling, Locked knee, and several possible inability to bend and Pain difficulty straightening the leg, bruising, and swelling alleviate discomfort difficulty walking or running, knee instability. patient all local examinations were done in the anesthesia department for consult of operation. the procedure of individual knee manipulation decreased GA and SOS mini quadriceps release Operation.

**Diagnostic Assessment:-** Physical examination, X-ray, and MRI results These are X-rays of the leg taken from the hip to the ankle. which helps the doctor locate the exact location and mechanical axis of the deformity. And also another investigation Of Hb -9.2gm, MCH-56.1fl, total WBC Count-11100/cu. mm, Total platelet Count-4.2lacs/cu.mm,RBS-91mg,urea-18mg/dl,sodium-139,potassium-4.6

**Diagnostic Evaluation:-** After a physical examination and conducting more research, a diagnosis of a deformity-locked knee is made.

**Table 1: Significant Clinical Findings**

| Blood investigations | Patient value | Normal value     | Inference |
|----------------------|---------------|------------------|-----------|
| S. Sodium            | 136mmol/L     | 135-145mmol/L    | Normal    |
| Urea                 | 16mg/dL       | 12-20mg/dL       | Normal    |
| Potassium            | 4.3mmol/dL    | 3.5-5.5mmol/dL   | Normal    |
| RBS                  | 86mg%         | 70-150mg%        | Normal    |
| HB%                  | 11.1gm%       | 13-15g%          | Decreased |
| MCV                  | 79cub.micron  | 80-90cub.micron  | Decreased |
| MCH                  | 24.8pico gm   | 26.5-33.5pico gm | Decreased |
| HCT                  | 35.3%         | 40-50%           | Decreased |

**Therapeutic intervention:-**

Surgical intervention: The surgical knee was kept in place as the patient lay on his back. in the knee manipulation decreased GA and SOS mini quadriceps release Operation. patient under general anesthesia and OT quadriceplasty of the right knee (soft tissue reconstruction) Postoperative medication 1 unit normal saline at 50 ml /hr. injection. Ceftriaxone 650mg iv bd, injection .pantoprazole 20mg iv od, injection. neomol 20ml iv od, Syp. Calcimax 5ml orally bd.Syp. Ibugesic plus 2.5 ml bd. Syp. B-complex 1/2ml TDS.

**Followup and Outcomes:-**

Clinical and patient assessment outcomes:- patient's condition improved after OT.

Necessary follow-up diagnostic and other test results:- Illness prevention aims to delay the onset of any signs and symptoms, such as decreased child irritability following surgery, patient comfort, diminished sleep, surgery, and the subsequent correction of knock knees with an Ilizarov-Veklich device, an external fixator, and vitamin D and calciu supplements. Children don't need to refrain from exercising, wear braces or special footwear, or perform any additional exercises.

**Intervention adherence and tolerability:-**

The patient consistently took all prescription drugs.. the patient's meds were taken as directed. He also followed the dietician's advice, which included recommending multivitamins, folic acid solution, and protein-rich supplementation. His compliance with the advice was satisfactory. The knees will be propelled forward and backward as the doctor examines them, noting the range of motion and determining which motions are painful. They will search for painful spots, feel for warmth, and check for swelling. The doctor will also assess the stability of the ligaments.<sup>3</sup>

**Discussion:-**

When assessed one month following surgery, we discovered that patients who had total knee arthroplasty had significantly lost quadriceps strength, clearly failed to activate their muscles voluntarily, and had undergone a decrease in quadriceps cross-sectional area. The failure of voluntary muscular activation and atrophy working together accounted for the majority of the reason for the loss of strength. However, higher discomfort does not account for the increased activation failure following total knee replacement.<sup>3</sup> A greater portion of strength loss was caused by failure of voluntary muscular activation than by atrophy. The low preoperative quadriceps force output is probably due to poor voluntary muscle activation. According to preoperative testing, the patients in the current study had an average central activation ratio of 0.867 as contrasted to an average central activation ratio of 0.955 in healthy older individuals without known knee issues. According to central activation ratios of 0.92819 and 0.9648 from two recent studies using electrical burst-superimposition strength testing, patients with less severe knee osteoarthritis (grade 2 or 3 on Kellgren and Lawrence's scale) did not demonstrate as low a level of voluntary muscle activation.<sup>4</sup>

**Conclusion:-**

One month following surgery, individuals who underwent total knee replacements had a significant loss of quadriceps strength. This impairment is mostly caused by a failure of voluntary muscular activation, however, muscle atrophy also plays a minor role. Surprisingly little of the decline in muscle activation was caused by knee discomfort during muscular contraction.

**References:-**

- Dreyer F, Fikentscher T, Bigdeli A, Walther M, Harrasser N. Implantation einer „Pseudoknieprothese “nach Umkehrplastik: Ein Fallbericht. Die Orthopädie. 2022 Jul;51(7):590-4.
- Gränicher P, Mulder L, Lenssen T, Scherr J, Swanenburg J, De Bie R. Prehabilitation Improves Knee Functioning Before and Within the First Year After Total Knee Arthroplasty: A Systematic Review With Meta-analysis. journal of Orthopedic & sports physical therapy. 2022 Oct;52(11):709-25.

3. Lu V, Zhang J, Thahir A, Zhou A, Krkovic M. Charcot knee—presentation, diagnosis, management—a scoping review. *Clinical Rheumatology*. 2021 Nov;40(11):4445-56.
4. Takai H, Kiyota K, Nakane N, Takahashi T. Charcot fracture in the calcaneus after total knee arthroplasty: a case report. *Journal of Orthopaedic Case Reports*. 2016 Nov;6(5):92.