

# Baker's Cyst in Left Popliteal Fossa: A Case Report

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## Abstract

**INTRODUCTION:** A popliteal cyst, also called a Baker cyst, is a benign uncontrolled swelling of the gluteus medius sac in the popliteal fossa at the back of the knee described this excess fluid and subsequent sac formation outside of the kneecap in the commencement. A Baker's (popliteal) cyst is a swelling of the knee's gastrocnemius-semimembranous bursa, which connects to the back of the synovial membrane. It commonly presents as a painless swelling in the popliteal fossa. Adults almost always develop an edema as a result of pathological changes to the knee joint. Sometimes, the cyst enlarges to the position in which it ruptures, releasing synovial fluid into the surrounding tissues and present physiologically as acute thrombophlebitis. Popliteal cyst infection is a rare complication that is often related to septic arthritis. Popliteal joint cysts, also known to as Baker's cysts, are sporadically together with intra-articular knee conditions like osteoarthritis and dislocated patella. Anatomically, the borders of the cyst resemble synovial tissue, and there may be chronic, non-specific inflammation. Even if they are not visible in the knee joint, osteocartilaginous loose bodies may be present within the cyst.

**CLINICAL FINDING:** Pain in the back of knee were the main complaints of a 48-year-old female admitted to Tertiary Rural Hospital.

**DIAGNOSTIC EVALUATION:** Chest x-ray and blood test including all tests are done. Were all performed as part of the physical evaluation to prevent acute and chronic post-surgical discomfort following Excision of Bakers cyst.

**THERAPEUTIC INTERVENTION:** Post operative treatment advised 6 hours iv fluids normal saline, ringer lactate 500ml, antacids, antiemetic, analgesic given frequently advised as the first line of treatment following excision of baker cyst . It gives superior pain relief and allows for a speedier recovery.

**OUTCOMES:** Patient condition was poor.

**CONCLUSION:** Baker cyst is a benign uncontrolled enlargement of the bursa in the popliteal fossa at the back of the knee that is diagnosed in the hospital on the IPD based on the patient having symptoms of swelling and pain in the back of knee. Based on a patient admitted to Tertiary Rural Hospital for diagnostic tests are done as per doctor order blood test, surgery of the excision of cyst . To reduce acute and chronic post-surgical pain after excision baker cyst. Post operative medications advised.

**Keywords:** Baker's cysts, intra-articular knee disorders, popliteal synovial cysts, Conservative Treatments; Knee Osteoarthritis.

## INTRODUCTION

A Baker's cyst, also known as a popliteal cyst, is brought on by fluid retention of leg triceps shamstring muscles bursa and manifests as a painful fluid sac with synovial lining that associated with the knee cavity side of the popliteal fossa . [1].

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It usually manifests in individuals between the ages of 35 and 70. Common intra-articular knee conditions including osteoarthritis and ligament tears are linked to popliteal cysts. [2]. Charcot joint and degenerative arthropathy are two more potential causes. [3], and athlete's post-traumatic injury [4]. The majority of popliteal cyst patients are asymptomatic. The most common symptom, when present is a palpable swelling at the popliteal area with associated nonspecific pain. [5] The prevalence of Baker's cyst varies from 5 to 38%. [6]. Popliteal cysts were found 25.8% common in a population of 399 patients with knee discomfort, and their frequency increased with age. [7]. The study shows a typical example of Baker's cyst on an elderly female's deteriorated knee.

## PATIENT INFORMATION:

Patient-specific information.

A 48-year-old female was admitted to Tertiary Rural Hospital with the chief complaint pain in the back of the knee, swelling etc. Patient case Visited/Reported on Tertiary Hospital in IPD base.

The primary concern and symptoms of the family.

The patient primary concern is to reduce acute and chronic post-surgical pain after excision of bakers cyst.

Medical, Family, and Psychological history.

The current instance is a nuclear family situation. Her family is middle class, and her father is a farmer. She was aware and in good mental health. She understood the time, date, and location.

Relevant past intervention with outcomes: None.

## CLINICAL FINDINGS:

Significant physical examination (PE). and important clinical findings. Systemic Examination done no any significant changes, on local examination left knee inspection overlying skin intact large oval cystic lesion of approximate 55.4 x 26.4 mm seen in left popliteal fossa palpation diffuse pulsatile swelling is firm in consistency popliteal tenderness reduces on flexionknee range of motion full active ankle and toe movement distal circulation intact distal sensation intact.

## TIMELINE

A present case having a history of cyst back of the knee, pain visited the case in tertiary rural Hospital for diagnosis, implementation and evaluate the case and treatment of the case patient department bases and further management of the case with the chief complaint of pain in back of the knee.

## DIAGNOSTIC ASSESSMENT

During physical examination blood test was done, MRI and

CT- SCAN was done urine is normal HB is increasing RBC decrease, and surgery of the heart was done.

Diagnostic Challenges : No diagnostic Challenges were faced

Diagnosis: Baker's Cyst

Prognosis: Good .

Therapeutic interventions:

Medical treatment provided to the patient by doctor order Medication such as tab - pantaprazol 40 mg, Inj – Emset 4 mg, Inj- Diclofenac sodium 75mg mg.

## FOLLOW-UP AND OUTCOMES:

The patient is admitted to Tertiary Rural Hospital on IPD bases for diagnosis the Baker's cyst . A patient has pain in back of the knee, swelling hence to reduce acute and chronic post-surgical pain after surgery, Excision of Baker's Cyst therapeutic intervention was done, and follow-up for further management.

## DISCUSSION:

Ultrasonography makes a popliteal cyst diagnosis the simple. A cyst or posterior soft tissue growth with a size of 10 cm on average and anechoic or hypo echoic fluid situated between semimembranosus and large posterior muscles of the calf of the legs are common findings. [8-20].

A Baker's cyst will appear on magnetic resonance imaging (MRI) as a well-defined infiltrative cell is produced cystic mass that develops posterior aspect between the semimembranosus tendon and the medial head of the gastrocnemius. [21]. In cases of popliteal cysts, fluid excessively present. [22]. Deep vein thrombosis (DVT), solid masses including sarcoma and lymphoma, synovial or ganglion cysts, and popliteal artery aneurysms are some of the most frequent differential diagnoses. Deep Vein Thrombosis is the most common condition is serious because blood clots can loosen and lodged in the leg. Low - molecular - weight heparin may sometimes be given for probable DVT in conditions where quick imaging is not available. Heparin treatment may actually cause compartment syndrome if the condition is actually a Baker's cyst as compared to a DVT. [22].

## CONCLUSION:

A typical normal physiologic variant is a capsular hole that releases fluid into the hamstring muscles of the gluteus medius. It is considered that popliteal cyst formation may develop in the case of chronic knee effusions caused on by intra-articular disease. Popliteal cysts that are symptomatic are treated conservatively. A first step in treating Arthroscopy should be performed on the intraarticular disease. A restricted posteromedial approach is often used if a surgical excision is ultimately required. Other therapies, including as arthroscopic debridement and valvular mechanism closure,

are not yet possible. Baker's cysts make knee osteoarthritis more severe. However, patients with Baker's cyst and knee osteoarthritis, conservative treatment can result in significant improvements for both conditions the efficacy of the treatment reduces over the course of six months.

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