EUSEM PRAGUE 2019 12-16 OCTOBER
THE EUROPEAN EMERGENCY MEDICINE CONGRESS
www.eusem.org

RUPTURED BAKER'S CYST MIMICKING DVT

Nurain Kasuan[1], Noorsyakira Osman[1], Asim Rafiq[1], Nagabathula Ramesh[2]
Emergency Department[1], Radiology Department[2]
MIDLAND REGIONAL HOSPITAL PORTLAOISE, CO. LAOIS, IRELAND

Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

Introduction:

Baker's cyst is also known as a popliteal cyst is a swelling as a result of synovial fluid distending the gastrocnemio-semimembranosus bursa. There are 2 types of cysts; Primary cysts which have not communicate directly with the knee joint. Usually asymptomatic and common in young people. Secondary cysts communicate with knee joint and contain fluid of normal viscosity. Its more common in older people, associated with underlying articular disorder and often cause symptoms.

The reported incidence and prevalence greatly depending on type of imaging used. Baker's cyst was diagnosed with ultrasound in 25% of patient with knee pain. CT Venogram and MRI are also helpful as diagnostic tools in difficult cases.

Case Report :

34-year-old man presented to Emergency Department (ED) with 1 week history of persistent and painful swelling of left leg.

He had a Doppler scan on his left lower limb, for the same symptoms 4 days ago.

The Doppler, which was performed at another hospital, ruled out DVT but suggested the diagnosis of left popliteal region Baker's cyst.

The patient was discharged on oral Cefuraxime.

There was no history of trauma, fever or background history of any medical or surgical illness.

Clinical Examination :

On presentation, his vital signs were within normal range and examination revealed significant swelling and tenderness over the left calf. There was no erythema or increased in skin temperature. Distal pulses and sensations were intact.

Investigations:

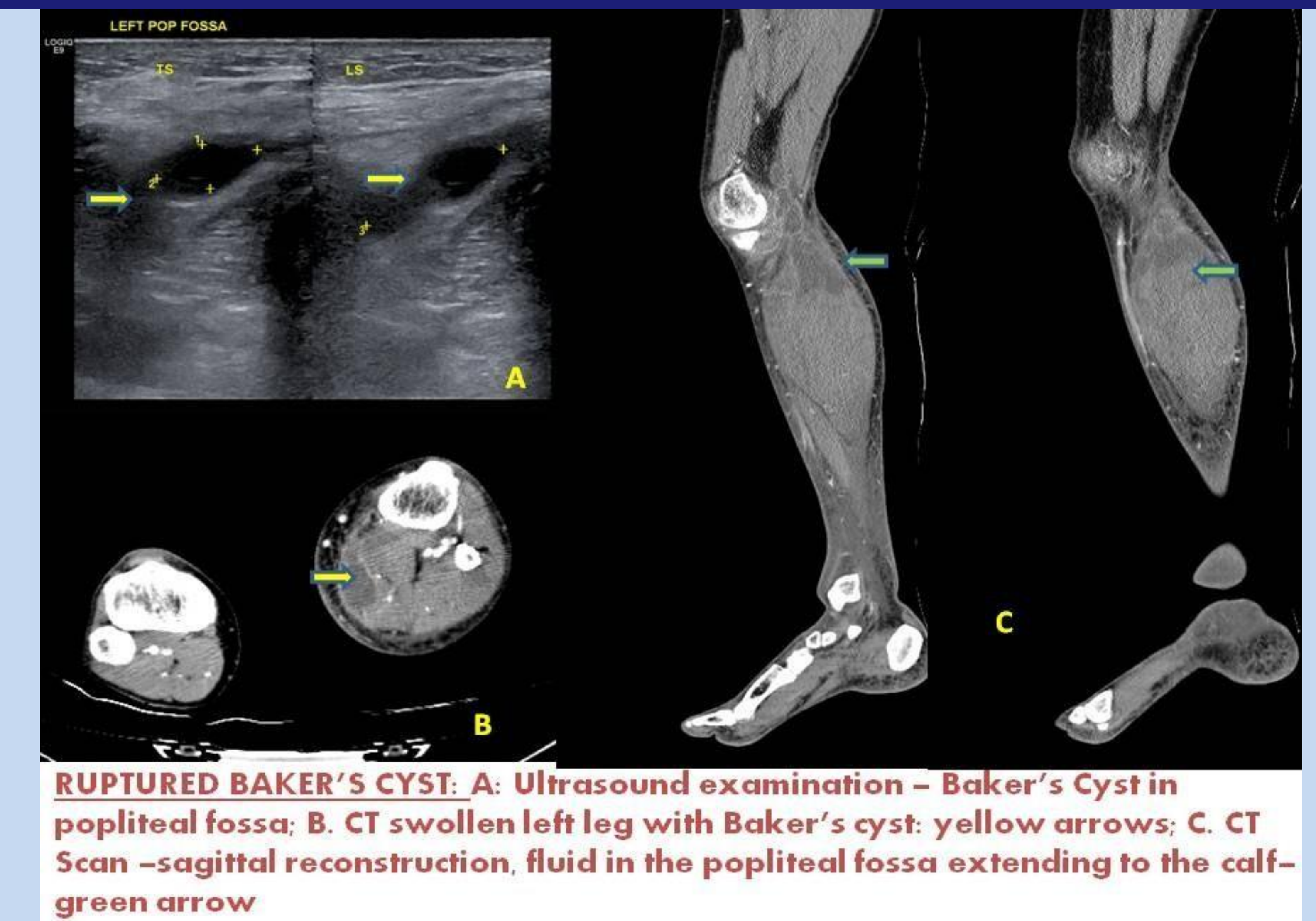
Laboratory investigations showed elevated levels of CRP (32) and D-dimer (1203). Left Tibia and Fibula X-ray did not reveal any bony injury. Ultrasound Doppler was repeated which again was negative for DVT. However Baker's cyst was not mentioned.

Treatment:

Patient was treated for cellulitis, with IV Benzylpenicillin, and was admitted to the hospital. Analgesia, TED sock and prophylactic LMWH were also commenced. However patient's pain was deteriorated next day.

CT venogram of left lower limb was performed which demonstrated ruptured Baker's cyst at the popliteal region with fluid extending inferiorly in the compartments of the calf up to level of the ankle with superadded infective and haemorrhagic changes and fluid around the knee including the posterior and suprapatellar regions.

He was discharged home with oral Co-amoxiclav, leg elevation and follow up at Orthopaedic out patient clinic.



RUPTURED BAKER'S CYST: A: Ultrasound examination – Baker's Cyst in popliteal fossa; B. CT swollen left leg with Baker's cyst: yellow arrows; C. CT Scan –sagittal reconstruction, fluid in the popliteal fossa extending to the calf– green arrow

Conclusion:

Doppler scan was preformed on both presentations and both scan was negative for DVT. Despite negative Doppler, DVT was suspected due to raised D-Dimer levels. It is important to consider other causes in differential diagnosis for calf pain and swelling; especially ruptured Baker's cyst which is not very uncommon. Ultrasound is a great tool to diagnose ruptured Baker's cyst, with 95% specificity and sensitivity. Although Doppler ultrasound is more reliable to diagnose ruptured Baker's cyst, it is operator and patient body habit dependant, CT venogram is commonly used for imaging of Baker's cyst, it can provide important investigating tool in difficult cases. MRI is considered as a better imaging modality. There is a significant morbidity associated with Baker's cyst rupture such as compartment syndrome hence prompt diagnosis is very important.