

# Ganglion cyst of the leg: A rare site

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Dear Sir,

A ganglion cyst is best described as a cyst filled with mucinous material within the vicinity of a joint or tendon sheath. It may cause pain, weakness and partial disability of the joint. It most commonly occurs on the dorsal aspect of the wrist. Other common sites are volar surface of the wrist and fingers, dorsum of the foot, around the ankle and the knee, and in the articular and ligamentous areas of the spine. It has seldom been reported in the middle portion of the leg away from the adjacent joints.<sup>[1,2]</sup>

A 35 year old male presented to the OPD with swelling in the anterior part of the left leg for 2 months, which was gradually increasing in size. There was no history of pain or prior trauma. On examination it was a 2.5 x 1.5cm swelling situated in the anterior part of the right leg 3cm away from the knee joint. It was firm in consistency, not mobile and non tender. (Figure 1) X-ray (antero-posterior view) of the leg showed that the tibia, fibula and knee joint were unremarkable. FNAC was performed and thick, colorless, jelly like material was obtained. Smears revealed numerous muciphages in a myxoid background and a diagnosis of ganglion cyst was made (Figure 2). The patient was treated conservatively and on follow up after 3 weeks the swelling markedly decreased in size.

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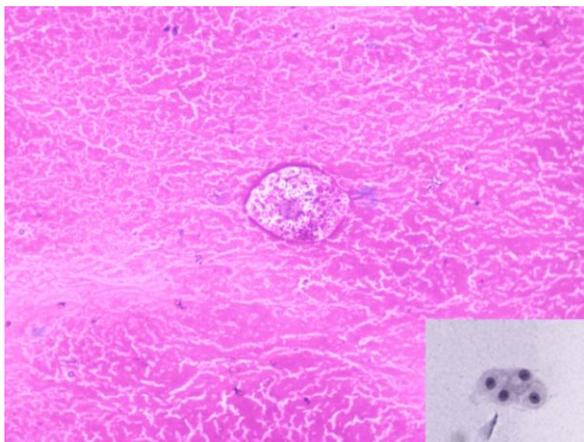
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**Figure 1:** Clinical photograph showing a swelling in the middle of the leg away from the knee joint



**Figure 2:** Giemsa stained smear showing a muciphage in a background of abundant myxoid material (100x) with inset showing cluster of muciphages in pap stain (400x)

Ganglia are thought to arise from myxoid degeneration and cystic softening of the connective tissue of a tendon sheath or joint capsule usually in middle aged males. Other theories for the development of ganglion cysts suggest that they may be the result of a lack of support from surrounding structures which leads to a gradual disturbance in the mechanics of movement and the production of excess fluid in a synovial membrane.<sup>[3]</sup> It is possible that this cyst may originate from a minute portion of synovial membrane being protruded and strangulated so that it becomes disconnected from that to which it originally belonged. It may then degenerate and give rise to colloid material, which accumulates and forms a cyst.<sup>[4]</sup> This could be the likely pathogenesis of our case.

Kobayashi et al<sup>[1]</sup> and Choi YS<sup>[2]</sup> et al reported periosteal ganglion cysts of the anterolateral region of the metaphysis of the tibia which were confirmed on X-ray. Our case however showed no bony association of the lesion and thus is the first of its kind at this site not to involve the bone. Also, a ganglion cyst must be included in the differential diagnosis of soft tissue masses in this region. FNAC is a useful, non invasive procedure to diagnose this lesion.

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#### Competing Interests

None declared.

#### References

1. Kobayashi H, Kotoura Y, Hosono M, Tsuboyama T, Sakahara H, Konishi J. Periosteal ganglion of the tibia. *Skeletal radiol* 1996;25:381-3.
2. Choi YS, Kim BS, Kim DH, Chun TJ, Yang SO, Choi KH. Sonographic Evaluation of a Tibial Periosteal Ganglion With an Intraosseous Component. *J Ultrasound Med* 2006;25:1369-73.
3. Labropoulos N, Shifrin DA. New insights into the development of popliteal cysts. *Br J Surg* 2004;91:1313-8.
4. Garg S, Al-Jabri T, Mutnal S, Mofteh F. A giant ganglion cyst of the semimembranosus tendon: a case report. *Cases Journal* 2009;2:8305.