Ganglion of the hip joint - We present a logical approach to the exploration of a mass in the femoral triangle

Surg Lt MD Clarke
BSc,MBBS,RN
SHO Surgery

Maj DP Edwards
FRCS,RAMC
Specialist Registrar

Surg Cdr P Barker
MS,FRCS,FICS,RN
Consultant Surgeon

Department of Surgery, Royal Hospital Haslar, Gosport, Hants PO12 2AA

SUMMARY: Hip joint ganglion is a rare cause of a mass in the femoral triangle. Our patient presented with a swelling in the groin and a history of femoral hernia repair 5 years previously. Pre-operative assessment with ultrasound suggested a possible femoral artery aneurysm. We propose that safe exploration of a mass closely related to the femoral vessels must include vascular control.

Discussion

Ganglia are locular cystic cavities with a myxoid matrix. They often communicate with a joint space; they may have a lining of epithelium making them true synovial cysts. Their aetiology is uncertain however, and cystic degeneration of a joint capsule is a widely quoted popular hypothesis made by Ledderhouse in 1893 (1,4).

Other suggestions include cystic swelling of tendon sheaths or bursae, embryological displacement of synovium, high intra-lumenal pressure causing herniation of synovial membrane through the joint capsule and attrition of the joint capsule by overlying tendon with subsequent expansion of the tendon sheath (1,5,6).

Enlargement of a synovial bursa is often overlooked as a possible cause of a mass in the femoral triangle. Necropsy studies demonstrate the iliopsoas bursa is present in almost all adults and communicates with the hip joint in 14% of normal and up to 40% of arthritic hips (7). Its close association with the lateral boarder of the femoral artery is well described (2,8).

Ganglia of the hip are a rare cause for a mass in the femoral triangle. Our search of literature found 18 cases of hip ganglia presenting with a mass in the femoral triangle reported in English language journals with other reports of enlarged non-communicating iliopsoas bursae and ganglia presenting with symptoms of vascular occlusion but no palpable mass (1-9).

Accurate preoperative diagnosis was made in four cases and on each occasion influenced the surgical procedure (2,7,8). In
all the others the correct diagnosis of hip ganglion was only made at operation. Several authors include aneurysm associated with the femoral artery in the differential diagnosis at the time of operation, others make reference to intimate association with the femoral vessels (2-4,6).

Symptomatic hip disease is described in the majority of case reports although this was not a finding in our patient (1,2,5,7,8). Vascular symptoms, predominantly venous compression have also been reported (8,9). Operative findings often demonstrated a mass in close relation to the femoral artery displacing the artery medially and the femoral nerve laterally (2,6).

Radiological imaging was often requested prior to surgery. The presence of intra-ganglionic gas, has been described as a rare but specific feature of hip joint ganglia (10). This feature, if present, may help differentiate between ganglia and false aneurysms, in the absence of a gas forming organism. The role of different imaging modalities in the investigation of femoral ganglia has been extensively discussed (5). Contrast CT would appear to be most informative.

Standard approaches to a femoral hernia do not afford good access to iliac vessels and approaches to a femoral aneurysm may hinder hernia repair. The inverted hockey stick allows extra-peritoneal control of the external iliac artery and superb exposure of all contents of the femoral triangle. We suggest that the high rate for mis-diagnosis of a femoral ganglion is of secondary importance, but mis-diagnosis of a false aneurysm could be catastrophic particularly when surgical exposure is poor.

Fig 1. The Left femoral triangle - Access through the inverted hockey-stick incision.

REFERENCES
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MD Clarke, DP Edwards and P Barker

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