Clinical History:

A 43-year-old woman presented with a swelling in the left inguinal area, noticed four months before and remaining unchanged in size. She complained of intermittent pain in the area and night sweats.

Physical examination revealed no other findings apart from the swelling itself. Laboratory tests were normal.

Imaging Findings:

Contrast-enhanced computed tomography (CT) revealed a soft-tissue mass (19 x 24 x 46mm) located in the anterior abdominal wall, just anteriorly to the left rectus abdominis muscle, medially to the internal inguinal ring, and with a long axis in an oblique position alongside the (supposed) position of the inguinal ligament. The borders, although somewhat irregular, can be clearly delineated from the subcutaneous fat anteriorly and laterally, but not from the underlying muscle posteriorly. In the superior half of the mass, the periphery of the mass appears hyperdense (ring-like on transverse sections), surrounding a relatively hypodense central part. Since no unenhanced series have been included in the study, differentiation between peripheral calcification and increased contrast enhancement is not possible. The inferior half has a more homogeneous density, similar to muscle.

We note the presence of both ovaries in the pelvic region.

Discussion:

An ectopic ovary in the inguinal canal is occasionally found in the newborn, but it is extremely rare in premenopausal women [1]. It can be the result of prolapse or descent during embryologic development [2] or of inguinal herniation during childhood or adulthood [3, 4].

Ovarian tissue in addition to the normal ovaries is a very rare finding [5]. The aetiology is still a subject of debate, as are terminology and classification [5]. Development of accessory or supernumerary ovaries has been hypothesized as aberrant migration of part of the gonadal ridge after the incorporation of germ cells.

Wharton [6] defines an accessory ovary as excess ovarian tissue, situated near a normal ovary and sometimes connected with it, that seems to have developed from the ovary, possibly from tissue split from it early in development.

We found an accessory ovary, connected with the left ovary through the round ligament and herniated into the inguinal canal, probably during foetal life. To our knowledge, such a finding has not been described before.

The pre-operative diagnosis of accessory or supernumerary ovaries has been notoriously difficult [7]. The patient is
asymptomatic or presents with non-specific symptoms, mostly pain and/or irregular menses. Associated complications include torsion, mass effect on other organs and malignancy (36% of reported cases [7]).

In adults, the ectopic ovary is usually an incidental finding, or a surprise histopathological diagnosis after resection of a clinically relevant mass; although in some cases it can be suspected on the basis of hormonal abnormalities. Ultrasound, CT or MR imaging can show a mass, but cannot usually differentiate between endometriosis, an inflammatory lymph node, lymphoma, metastasis or sarcoma. Due to increased risk of malignant transformation, surgical excision of accessory and supernumerary ovaries is the treatment of choice [5].

In our case, surgical exploration of an inguinal lump revealed ovarian tissue, confirmed by histology. Retrospectively, the CT findings of a ring-like hyperdensity with hypodense centre may have represented the “ring of fire” accompanying a corpus luteum. No fallopian tube was found in the inguinal region; there were no Mullerian duct abnormalities, and two ovaries were present in the pelvis. Therefore, the tissue found in the inguinal region was classified as an ectopic, accessory ovary.

**Differential Diagnosis List:** Ectopic, accessory ovary in the inguinal canal, Endometriosis, Lymph node (inflammatory), Lymphoma, Metastasis, Sarcoma

**Final Diagnosis:** Ectopic, accessory ovary in the inguinal canal

**References:**


Wharton LR (1959) Two cases of supernumerary ovary and one of accessory ovary, with an analysis of previously reported cases. Am J Obstet Gynecol 78:1101-19 (PMID: 13844256)

Description: Transverse section showing a soft-tissue mass (yellow arrow) located in the anterior abdominal wall, just anteriorly to the left rectus abdominis muscle, medially to the internal inguinal ring. Its density is similar to the muscle. Origin: Department of Radiology, University Hospital Ghent, Belgium
Description: Transverse section through the superior half of the mass (yellow arrow) showing the hyperdense (ring-like) periphery of the mass, surrounding a relatively hypodense central part. Origin: Department of Radiology, University Hospital Ghent, Belgium
Description: Coronal section showing the long axis of the mass (yellow arrow) in an oblique position alongside the (supposed) position of the inguinal ligament. The borders are somewhat irregular. The superior half has a hyperdense margin. Origin: Department of Radiology, University Hospital Ghent, Belgium
Description: Coronal section showing the irregular hyperdense margins and hypodense central part of the superior half of the mass (yellow arrow). Origin: Department of Radiology, University Hospital Ghent, Belgium
Description: Sagittal section showing the somewhat irregular inferior border of the mass (yellow arrow), with hyperdense margins and a hypodense central part in the superior half of the mass. Origin: Department of Radiology, University Hospital Ghent, Belgium
Figure 2

Description: Transverse section showing the right ovary (yellow arrow) in the ovarian fossa. An intra-uterine device is present. Origin: Department of Radiology, University Hospital Ghent, Belgium
Description: Transverse section showing the left ovary (yellow arrow) anterolaterally to the uterine body. Origin: Department of Radiology, University Hospital Ghent, Belgium
Description: Transverse section showing both round ligaments (yellow arrows) extending from the uterus (broad ligament) to the internal inguinal ring. They both appear normal. Origin: Department of Radiology, University Hospital Ghent, Belgium