

# Incarcerated adult femoral hernia containing a fallopian tube

## Abstract

Femoral hernias are not common in the adult population however they are often associated with higher rates of incarceration compared to other hernia subtypes. Subsequently they have an increased need for emergency surgical intervention. It has been well documented in the literature that femoral hernia sacs can contain an array of anatomical structures and rarely this includes fallopian tube. Within the limits of the authors' literature review, this case represents the only documented pre-operative diagnosis of femoral hernia containing fallopian tube.

*Keywords:* fallopian tube, femoral hernia.

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**Figure 1:** Pre-operative USS demonstrating femoral hernia sac containing finger-like projections consistent with fimbriae of the fallopian tube.

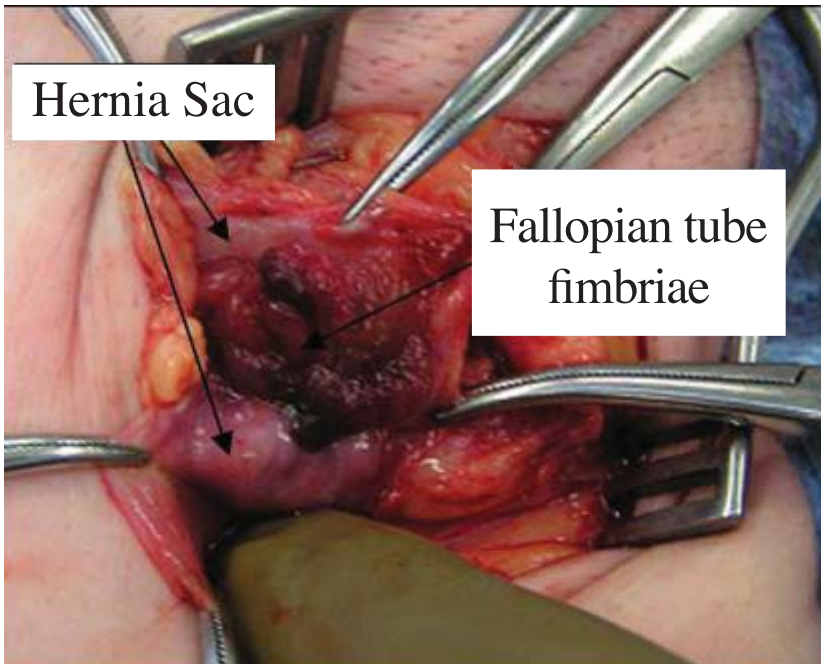
## Case

A 46-year-old female presented with a 24-hour history of a palpable tender swelling in the right groin. On examination, there was a tender non-pulsatile mass in the right groin below and lateral to the pubic tubercle and medial to the femoral vessels. Ultrasonography (Figure 1) demonstrated a complex mixed solid and cystic structure measuring 28 x 25 x 29 mm lying medial to the femoral vessels. The solid component had finger-like projections with normal intensity arterial flow as demonstrated on colour Doppler. A provisional diagnosis of strangulated femoral hernia was

made and the patient was taken to theatre from the emergency department. At operation, the hernial sac was opened and a right strangulated femoral hernia containing viable ampulla and infundibulum with its associated fimbriae of right fallopian tube (Figure 2) was identified. The contents were reduced, the sac excised and the defect repaired with a polypropylene mesh plug. The postoperative recovery was uneventful.

## Discussion

Femoral hernias are more common among women, with a 10:1 incidence ratio when



**Figure 2:** Opened femoral sac demonstrating the incarcerated fallopian tube.

compared to the male population. Although less common than most other forms of hernia, femoral hernia tend to be associated with higher rates of incarceration and subsequent emergency surgical intervention<sup>1</sup>. Herniation of a fallopian tube in a femoral hernia is a very rare event, due to the normal anatomical position, as it lies at a lower anatomical level than the femoral ring. Furthermore there is no embryological connection between the two structures. The incidence of femoral hernias containing fallopian tube is higher in the paediatric population due to closer proximity of the adnexal structures to the femoral canal<sup>2</sup>. In addition to fallopian tubes, Alzaraa<sup>2</sup> notes that previously reported rare contents of femoral hernias include saphena varix, lymph nodes, arterial aneurysms, sarcoma, psoas abscesses and ectopic testicles in males.

Literature search reveals that four similar cases in adult patients were published between 1905–1916<sup>3–6</sup>, however these cases predated the era of diagnostic imaging. Two of these cases involved strangulated fallopian tube alone whilst the other two revealed fallopian tube and ovary within the hernia sac. A fifth case report published by Atmatzidis, *et al.*<sup>7</sup> included an ultrasound examination, however it failed to reveal the diagnosis preoperatively. To the best of our knowledge, this case report therefore displays the only published case report where the diagnosis of strangulated fallopian tube in a femoral hernia was diagnosed pre-operatively.

At time of operation, if the fallopian tube is deemed viable it should be returned to the pelvic cavity. If there is suspicion of non-viable, gangrenous or gross pathological changes the structure should be resected.

Despite its rarity, one should be aware of the existence of this condition, especially when treating female patients presenting with clinically strangulated femoral hernias.

#### References

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