CASE REPORT

A stepwise approach to 'groin pain': a common symptom, an uncommon cause

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SUMMARY

A 70-year-old man was admitted with stinging pain in his right groin radiating towards his inner thigh. In a few days, the pain increased in intensity, he experienced diminished strength in his right leg and got dependent on morphine. Conventional investigations did not show any pathology. A CT-scan revealed a mass in the obturator foramen, indicative of a possible obturator hernia or neuroma of the obturator nerve. However, an additional MRI showed a well-circumscribed cystic mass in the obturator foramen, indicative of a ganglion cyst. This cyst was percutaneously punctured under the CT-guidance and the viscous material was aspirated, after which corticosteroids were injected. After the puncture all symptoms of the patient had completely resolved and the patient was discharged from the hospital without any painkillers.

BACKGROUND

Groin pain is a common symptom, especially among older people. This case report points out that groin pain is not always due to osteoarthritis or myogenic symptoms. In case of symptoms that cannot be explained by the most common causes, doctors have to look further and think of diagnoses that occur less frequently.

CASE PRESENTATION

In April 2012, a 70-year-old man presented himself to the emergency department with stinging pain in his right groin radiating towards his inner thigh. The pain emerged 6 days earlier, increased in intensity and was constantly present with exacerbations lasting for several hours. Furthermore, he reported about diminished strength in his right leg and he needed a stick as support to walk. At the time of admission to hospital he was dependent on morphine to suppress the pain. His medical history entails diabetes mellitus type 2, correction of an umbilical hernia and hearing loss, without any trauma prior to his symptoms. On physical examination there were no visible or palpable abnormalities in the groin region, especially no inguinal or femoral hernia. The pain could not be provoked or influenced by palpation or hip movements. Both left and right hips had full range of motion without impairments in strength or sensation of the legs. In retrospect, especially the muscles innervated by the obturator nerve (m. obturator externus, m. adductor longus, m. adductor brevis, m. adductor magnus, m. gracilis and the m. pectineus) and the sensation in this particular area was normal. The patients' blood pressure, heart rate and temperature were normal. In addition, the neurologist

excluded radiculopathy or lumbar herniation by means of physical examination. Laboratory investigations showed no signs of infection or other abnormalities, with a C reactive protein value of 1 mg/L (reference values 0.0–9.0 mg/L) and a leucocyte count of $7.8 \times 10^{-9}/L$ (reference values $3.5\text{--}10.0 \times 10^{-9} L$).

INVESTIGATIONS

The first diagnostic step was to perform traditional X-rays. Lumbar, pelvic and hip X-rays were completely normal besides some minor degenerative features. Hereafter an ultrasound of the groin region was made, showing no pathology. Owing to the severity of the pain further analysis was performed by means of a CT. A CT was preferred over an MRI since the physical examination showed no signs of radiculopathy or lumbar herniation. In addition a CT scan is useful to detect neoplasms, hip problems, infections and strangulated hernia's. However, if one suspects cystic lesions or needs characterisation of soft tissue tumours an MRI scan would be more beneficial. The CT revealed a mass in the obturator foramen on the right side, indicative of a possible obturator hernia or neuroma of the obturator nerve. As these conditions require a very different treatment approach an additional MRI was made to obtain a more conclusive diagnosis. The MRI indeed showed a well-circumscribed cystic mass in the obturator foramen, indicative of a ganglion cyst (figure 1). We assumed that the ganglion cyst has arisen from the hip joint.

Figure 1 Ganglion cyst (indicated by the red arrow) of the right obturator foramen on T2-weighted MRI.

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DIFFERENTIAL DIAGNOSIS

Differential diagnosis of groin pain in our patient:

- ▶ Neoplasm.
- ▶ Strangulated hernia (inguinal/femoral/obturator).
- ▶ Hip—avascular necrosis, transient osteoporosis.

Osteoarthritis:

- ▶ Referred pain—lumbar spine or pelvis.
- ▶ Infection.

TREATMENT

The interventional radiologists percutaneously punctured the cyst via an anterior approach under CT-guidance and indeed viscous material was aspirated, after which corticosteroids were injected.

OUTCOME AND FOLLOW-UP

The pathology report confirmed our diagnosis of a ganglion cyst. More importantly, after the puncture all symptoms of the patient had completely resolved. He was discharged from the hospital without any painkillers. So far, after 1 year and 3 months of follow-up, no recurrence has occurred.

DISCUSSION

Two other cases of ganglionic cysts in the obturator foramen are described.^{1 2} These cases concern younger patients and surgical excision of the ganglion cyst was performed successfully. Surgical excision is the most preferred treatment of ganglion cysts, which usually occur at the dorsum of the wrist, since they are known for their high recurrence rate when other treatments are applied. Nevertheless, the ganglion recurs even in 15–40% of the operated cases.³ This case shows that puncturing a ganglion cyst in the obturator foramen is a minimally invasive

treatment option, especially for the elderly patient in whom extended surgery is not preferable. However, long-term effects remain unknown.

Learning points

- ▶ Groin pain in older people is not always due to osteoarthritis or myogenic symptoms.
- ▶ Puncturing a ganglion cyst in the obturator foramen is a minimally invasive treatment option, especially for the elderly patient in whom extended surgery is not preferable.
- ▶ An MRI is an adequate tool for diagnosing ganglion cysts in the obturator foramen.

Contributors KMJDB was involved in data collection, literature search, figure selection, writing, GF was responsible for corrections of text. TMG was involved in data collection and writing.

Competing interests None.

Patient consent Obtained.

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