The patient presented with chronic scrotal swelling.

**Imaging Findings:**

The patient underwent scrotal ultrasonography with a linear high-frequency transducer. This examination revealed an enlargement of the left epididymis with heterogeneity of echogenicity in its tail. In the head of epididymis, we observed two cystic structures: one bigger was found inside the head of epididymis and one smaller was seen attached to it. The latter structure was sessile, small, non-septated and anechoic in relation to the head of epididymis and testicular parenchyma. The imaging of this structure was facilitated by the presence of hydrocele. Colour Doppler ultrasonography revealed no blood flow within this structure but mild increase of blood flow in the epididymidal parenchyma.

**Discussion:**

The testes originate from the genital ridge, whereas the mesonephric ducts differentiate into the epididymis, the vas deferens and ejaculatory duct. The appendix testis, and the appendix epididymis (AE) represent remnants of these ducts. There are three rarely found scrotal appendages: the paradidymis (or organ of Giraldes) which arises from the spermatic cord and the superior and inferior vas aberrans of Haler. [1]

AE is found in the head of epididymis in 34% of autopsies, whereas a study reports that they can be seen in 6% only of ultrasonographic examinations. It is usually isoechoic to the testis or epididymis and its length ranges from 3 to 8 mm. AE is usually stalked, but can also be sessile, elongated or round and occasionally contains septa. Histology shows that AE consists of ducts containing epithelial serous secretions. [1, 2, 3]

Another recent study determined that testicular appendages are found in 61.9% of ultrasonographically examined testes. AE was found in 17.6% of cases. 36.4% of them were cystic, like in our patient. Among them, the most frequent type was stalked and cystic, without septa. [2]

Luciano et al. showed that the incidence of scrotal appendages is not statistically significantly different in patients with cryptorchidism. [4]

When the appendages undergo torsion, patients (usually children) complain of acute scrotal pain and swelling.
Ultrasonography reveals an enlarged (up to 17mm) appendage with increased echogenicity, whereas the testis itself appears normal. [1, 5]

A recent study concluded that the identification of a testicular appendage longer than 5.6mm was 68.2% sensitive but 100% specific in diagnosing appendicular torsion. [6] Hydrocele may also be found in cases of torsion. Differential diagnosis must be done from acute epididymo-orchitis where we can see enlargement of testis and epididymis, heterogeneous echogenicity and increased blood flow on colour Doppler examination. Finally, a testis with torsion would appear enlarged, hypoechoic and without blood flow. Torsion of an appendix testis was recently reported in a patient with cryptorchidism. [1, 5, 7]

Patients with torsion of testicular appendages can be treated conservatively, with bed rest, scrotal support and drugs, whereas testicular torsion needs urgent surgical treatment. [1]

Testicular appendages are only rarely complicated by tumours. [8, 9]

Regarding cysts of epididymis, they are found in 20%-40% of scrotal ultrasonographies in asymptomatic patients. They may be multiple or bilateral, true or sperm-containing and measure up to 5cm in diameter. [10]

**Differential Diagnosis List:** Coexistence of a cystic epididymal appendix with an epididymal cyst., Cystic appendix epididymis, Torsion of testicular appendage

**Final Diagnosis:** Coexistence of a cystic epididymal appendix with an epididymal cyst.

**References:**


Description: This scheme shows the location of an epididymal appendix, attached to the head of epididymis. Origin: Vasileios Rafailidis
Figure 2

Description: This grey-scale ultrasonographic image demonstrates the head of epididymis with two cystic structures and hydrocele. One cyst lies inside the parenchyma whereas the other is exophytic, sessile and anechoic. Origin: Department of Radiology, “Gennimatas” General Hospital, Thessaloniki, Greece.
Description: Focused grey-scale ultrasonography of the head of the epididymis reveals a bigger parenchymal cyst in the head of epididymis and a smaller, round, sessile and anechoic structure attached to the head of epididymis. Origin: Department of Radiology, “Gennimatas” General Hospital, Thessaloniki, Greece.
Description: This examination reveals no blood flow within the exophytic cystic structure. Origin: Department of Radiology, “Gennimatas” General Hospital, Thessaloniki, Greece.