FIBROUS PSEUDOTUMOR AFFECTING THE TUNICA VAGINALIS, EPIDIDYMIS AND SEMINAL DUCT

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Summary.- OBJECTIVE: To report one case of advanced fibrous pseudotumour.

METHODS: A 34-year-old patient presented with a painless lump on the right side of the scrotum. Examination revealed a hard tissue thickening attached to the tail and body of the right epididymis. The results of the ultrasound study were not clear and multiple differential diagnosis were considered. The lesion was surgically removed by partial right epididymectomy and resection of the affected tunica vaginalis and ductus deferens for anatomopathological study.

RESULTS: The histopathological study revealed an evolved fibrous pseudotumour with bone metaplasia.

CONCLUSION: Fibrous pseudotumour is a benign paratesticular lesion that grows slowly and painlessly. It is usually diagnosed by chance or in associated processes such as hydrocele. Differential diagnosis with malignant tumors avoids unnecessary radical treatment.

Keywords: Fibrous pseudotumour. Paratesticular lesion. Testicle. Tunica vaginalis.

INTRODUCTION

Clinical diagnosis of fibrous pseudotumours is rare. The reactive non-neoplastic nature of fibrous pseudotumours was not recognised until 1960 (1).

72% of cases originate in the tunica vaginalis, 70% of which, in turn, are pure and 30% affect other structures such as the tunica albuginea, epididymis, spermatic chord and testicular parenchyma. 22% occur in the epididymis (75% pure and 25% affecting the tunica vaginalis, spermatic chord and testicular parenchyma), the rest are located in the spermatic chord and tunica albuginea or in a non-specified testicular area.
We report a new case of fibrous pseudotumour, a benign paratesticular lesion.

CASE REPORT

The subject is a 34-year-old patient with a history of right inguinal hernioplasty and repeated episodes of rheumatic fever during childhood.

He presented with an enlarged right hydrocele clinically diagnosed four years previously, causing occasional discomfort. The patient had no history of traumatism or infection at this level. Physical examination revealed a 6 cm right-sided tension-free hydrocele, with a hardening of approximately 2 cm on the inferomedial right side of the scrotum, the origin of which was not clear.

Ecographic examination of the scrotum showed a complicated right hydrocele with septums and thickening of the tunica vaginalis. The scrotal covering had heterogeneous, calcified dorsal areas measuring 3x2 cm that were not attached to the epididymis and a small extratesticular mark on the right testicle. The bilateral gonadal parenchyma was normal. The Eco-doppler showed normal vascularisation in both testicles and thickening of the lower right tunica vaginalis without vascularisation, in comparison with chronic pachivaginalitis. These findings were ecographically compatible with a chronic right-sided hemi-scrotal haematoma. Nevertheless, testicular tumour markers were requested and the results, ß-HCG: 0 mUI/ml and AFP: 0.9 ng/ml, were within normal limits.

On the day the patient was admitted, he was examined again and it was observed that the right hydrocele had reabsorbed spontaneously, and that the parietal hardening had become attached to the right epididymis, but remained painless. Palpation of the right testis was normal. As a result of these new findings, another ecograph was carried out and both testicles had a normal ecostructure, with reabsorption of the right hydrocele and several persistent calcified heterogeneous lesions in close contact with the tunica vaginalis and body and tail of the right epididymis, the largest of which left a mark on the right testicle, vascularisation not being observed in any of them.

As an anatomopathological diagnosis was required, and with the patient’s consent, the scrotum was examined under anaesthetic, a large fibrous magma without separation planes being observed, which enveloped the scrotal coverings, tail and body of the epididymis and proximal ductus deferens, with adherences to the albuginea testis, destructuring and obstructing the right seminal duct at the levels described. The lesion was resected by partial right epididymectomy of the proximal ductus deferens.

The anatomopathological report described a pearl-coloured lesion measuring 5 cm in diameter with a firm consistency and, when cut, a solid swirling pattern in the part corresponding to the tail of the epididymis and ductus deferens; the tunica vaginalis was thickened with whitish fibrous nodular areas.

The final diagnosis was a fibrous pseudotumour (reactive nodular periorchitis) that did not penetrate the ductus deferens or epididymis but obstructed the seminal duct by extrinsic compression due to peripheral fibrosis. Microscopic examination revealed the significant presence of lymphocytes, plasma cells and histiocytes producing a chronic residual inflammatory infiltrate, with microscopic calcifications as a result of bone me-

Figure 1. Macroscopic image of the surgical piece where the nodules with a fibrous aspect are observed (A). Microscopic image of the tunica vaginalis with fibrous nodules observed on the surface (B).
The immunohistochemical test was negative for smooth muscle actin, desmin, CD-34 and c-kit (CD-117) and showed no data of interest.

**DISCUSSION**

Non-testicular intrascrotal tumours account for 5% of the total number of intrascrotal tumours and originate in: the epididymis, spermatic chord, tunica vaginalis, scrotal wall tissue, adipose, muscle, fibroconnective, lymphatic and nerve tissue, and finally through metastasis (2).

Extratesticular solid masses are nearly always benign, with approximately 3% prevalence of malignancy, rhabdomyosarcoma being the most frequent (3,4).

Paratesticular fibrous pseudotumours, PFP, are known by many different names (5,6): Fibromatous periorchitis, Peritesticular fibrosis, Fibrous pseudotumour, Nodular periorchitis, Diffuse fibrous paratesticular proliferation, Nodular fibrous paratesticular proliferation, Benign fibromatose tumour in the paratesticular region, Calcifying fibrous pseudotumour, Chronic proliferative periorchitis, Non-specific paratesticular fibrosis, Fibrous proliferation of the tunica vaginalis, Fibroma, Chronic proliferative periorchitis, Nodular fibro-pseudotumour, Reactive periorchitis and "Scrotal mouse".

Fibrous pseudotumours are pseudotumoral lesions, and are probably reactive due to their frequent association with hydrocele, testicular traumatism or inflammatory processes. They are more common in males aged 30 to 60 years, but can occur at any age.

**Figure 2.** Fibrous tissue with abundant small veins and dystrophic calcification foci (A). More developed zone with acellular fibrous tissue ossification foci (B). More recent zone of fibrous tissue with inflammatory cellularity and veins (C). Epididymis with slight dilatation of some tubules and normal ductus deferens (D).
Hydrocele is more frequently associated with fibrous pseudotumour, appearing in 50% of cases. Infection by Schistosoma haematobium has also been associated with this process (7).

Histologically, this lesion is characterised by nodular proliferation of intensely hyalinised often calcifying (5,8,9) fibrous tissue, presenting tissue with fibroblast proliferation in a stroma with extensive production of collagen, capillaries and chronic inflammatory cell lines (plasma cells, hystocytes and eosinophils) with varying degrees of maturation according to the stage of development, from organised granulation tissue to completely hyalinised tissue. Dystrophic calcification or focal ossification has occasionally been observed in more advanced cases (10).

The presence of myofibroblast differentiation in most of the fusiform cells has been evaluated by several authors with positive markers for smooth muscle actin, specific muscle actin and vicentin. However, in a considerable number of cases, including ours, markers were negative for both actins. This lesion must be differentiated from others with a medium/firm consistency, such as adenomatoid tumours, idiopathic scrotal calcinosis, genital leiomyoma, polymatrixoma, meconial periorchitis, testicular mesothelioma or teratoma rich in chondroelement. Histopathologically, it is very similar to benign solitary fibrous tumours in the pleura.

The treatment of choice is removal of the tunica vaginalis to allow resection of the tumours. Occasionally, if there are numerous nodules on the epididymis it may not be possible to dissect the tunica vaginalis from the epididymis, and it has to be removed together with the other affected structures, which occurred in the present case, conservative surgery thus being performed.

CONCLUSION

Paratesticular tumours only make up 5% of total intrascrotal tumours and, among them, the pseudotumour is fourth in frequency after lipomas, epididymis adenomatoid tumours and leiomyomas, with rhabdomyosarcoma being the malignant lesion with the highest incidence.

They are slow-growing, painless lesions, difficult to locate when they affect both tunics and very heterogeneous given the presence of epithelial and mesenchymal tissue at this location. The most developed cases, such as that presented here, have microscopic inclusions associated with bone metaplasia.

Around two thirds of all fibrous pseudotumours of the genital area occur in the testicle tunicas. When a fibrous tumour appears in the scrotum, a differential diagnosis must be carried out with the tumour of the testicle tumour, that of the spermatic cord and that of the tunica vaginalis. It is therefore important to consider this pathology and make a histological diagnosis which differentiates among them in order not to condition unnecessary radical treatments.

In our case, spontaneous reabsorption of the hydrocele together with testicle examination, where thickening of the scrotal wall fused to the right epididymis was felt, meant that the initial diagnosis was modified. Surgical exploration of the lesion had to be carried out with exeresis for histopathological study, as the clinical interest of this pathological entity is the clear absence of aggressive behaviour or metastatic potential.

In contrast to the testicle lesions, 95% of which are malignant, 77% of paratesticle lesions are benign, with an ecograph and surgical exploration with peroparai-ve biopsy determining appropriate handling and thus avoiding radical orchietomy.

REFERENCES AND RECOMMENDED READINGS

(*of special interest, **of outstanding interest)

HEMATOCELE SECONDARY TO RUPTURE OF AN ABDOMINOSCROTAL HYDROCELE

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Summary.- OBJECTIVE: To describe one case of hematocele secondary to rupture of an abdominoscrotal hydrocele in an adult patient.

METHODS AND RESULTS: We report a huge hematocele in a patient with this unusual type of hydrocele that suffered a minimal scrotal trauma. It was a hydrocele that extended through the inguinal canal to the retroperitoneal space.

CONCLUSIONS: Abdominoscrotal hydrocele is a rare condition in children and even rarer in adults. The presence of a hematocele requires early surgical treatment.

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