Ectopic adrenal cortex associated with epididymal malformation in adult: A clinical case report

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ABSTRACT
To report a case of unusual ectopic adrenal cortex in adult.
A 35-year-old male consulted for vasectomy. During the procedure, a small right epididymal cyst was incidentally found. The ductus deferens was not identified. It was decided to achieve the treatment with a surgical exploration and the cyst was excised from the epididymis. The pathological analysis showed a nodule with microscopic adrenocortical tissue.
Ectopic adrenal cortex is normally seen in children. Epididymal localization in adults is a rare finding. Ectopic adrenal cortex is a benign lesion and no further investigation is mandatory.

1. Introduction
It is known that the adrenal cortex is prone to development of heterotopia. Para-testicular localization, as epididymis, is a rare site of heterotopic adrenal cortical tissue but some cases have described ectopic adrenal tissue in this region in children.1,2 To our knowledge, no case of ectopic adrenals with abnormal epididymis was reported in adult. Here we describe a patient with both anomalies.

2. Case presentation
A 35-year-old man, known for ulcerative colitis and impotence treated with Mesalazine and Tadalafil respectively, consulted our Urology department for an elective transcrotal vasectomy. Physical examination showed normal external genitalia (bilateral testis, epididymis and vas). On the right side, during the procedure and after the incision of tunica vaginalis, a cystic lesion of epididymis was discovered during the exploration. The ductus deferens was not identified. The same procedure was achieved on the left side with identification of a normal vas deferens with no anomaly of the epididymis and vasectomy was carried out. It was decided to achieve the treatment with a surgical exploration and the cyst was excised from the epididymis one week later, without complication. The procedure has been performed in day surgery regimen under epidural anesthesia.

Two fragments of epididymis (4.5 × 2.5 × 1 cm and 4.5 cm × 2.5 × 1 cm) attached to the testis were analyzed. One kystic cavity was observed (D:2.5 cm). No vas deferens existed.

The histological appearance of the excised tissues was consistent with adrenal cortex well encapsulated with fibrous tissue (Figs. 1 and 2).

3. Discussion
Because of the embryogenesis of adrenal gland, it is not rare to find ectopic adrenal cortex. Ectopic adrenal cortex can be found anywhere along the path of descent of the gonads. The explanation for the association between adrenal cortical tissue and gonads is the close proximity of the development of the adrenal cortex to the genital ridge during embryogenesis. The adrenal cortex arises from a mass of mesothelial cells. Cortical buds, which do not join the cellular mass, disappear or migrate to form accessory adrenal tissue in the region of kidney, celiac plexus, adrenal, testis, spermatic vessels or ovary.1 The adrenal medulla arises separately from sympathetic ganglia which invade the cortex of adrenal glands.1 This explain why ectopic adrenal nodules are composed only of adrenal cortex. Aberrant adrenal tissue in the paratesticular region is not frequent in pediatric patients with an incidence who varies from 1 to 9.3% and is very rare in adult, with an unknown incidence.3 To our knowledge, no aberrant adrenal tissue in epididymis in adults was described before, while we found in the literature some cases of ectopic adrenal gland in an adult inguinal hernial sac during surgical exploration.4 Concerning the surgical technique, nowadays the transcrotal

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approach for vasectomy represents the classic approach and appears to be the most comfortable and least invasive for the patient. In addition, with this approach was possible to perform vasectomy and cyst removal in this particular case.

Ectopic adrenal tissue far from the glands are usually composed of cortical adrenal tissue with no medullary cell encapsuled with connective tissue. In our case, the ectopic adrenal tissue consisted of glomerulosa and fascicular layers.

Aberrant adrenal tissue may have some theoretically clinical consequence. Neoplastic formation in ectopic adrenal tissue is rare but some cases have been reported in pediatric patient (pheochromocytoma, adrenal adenoma). In children, Sabeur and al. proposed to remove the ectopic adrenal tissue in the spermatic cord. This would be warranted during surgical exploration and incidental finding. It is important for surgeons to know that a nodule in paratesticular region may be an ectopic adrenal tissue and it should not be confused with primary tumor. Notwithstanding, we did not find in literature any case of adrenal ectopic tissue malignancy transformation in adult.

4. Conclusion

Any kind of lesion found during a surgical procedure in this area should be resected for histological analysis. After the histological confirmation of ectopic adrenal gland, no further investigation is needed because ectopic adrenal tissue in paratesticular region as epididymis is a rare but benign lesion.

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Fig. 1. Ectopic adrenal tissue of 1mm consisting of two layers of adrenal cortex (glomerulosa and fascicular layers) without medulary tissue.

Fig. 2. High power view of ectopic adrenal tissue of 1mm consisting of two layers of adrenal cortex (glomerulosa and fascicular layers) without medulary tissue.