Ectopic adrenal tissues at orchidopexy in children: A case series

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Abstract
Ectopic adrenal tissue is rare in children. Although its excision is recommended when found incidentally during inguinal surgical procedures, routine exploration is not indicated for the detection of its presence. Here, we present eight cases of ectopic adrenal tissue in pediatric patients who underwent orchidopexy.

Key Words
Ectopic adrenal tissue; ectopic surrenal tissue; undescended testis; inguinal surgery.

INTRODUCTION
Ectopic adrenal tissue (EAT) is a rare pediatric abnormality that occurs when fragments of adrenal tissue separate and finally reside in locations other than their origin. EAT can locate retroperitoneally from the diaphragm to the pelvis [1–8].

The aim of this study was to investigate the incidence of EAT in children who underwent inguinal surgical procedures.

CASE REPORT
EAT were investigated in 1032 patients [867 males (84%) and 165 females (16%)] who underwent inguinal surgical procedures at Dumlupinar University Kutahya Evliya Celebi Training and Research Hospital,
Kutahya, Turkey, and Dicle University Hospital, Diyarbakir, Turkey, between December 2004 and June 2010.

EAT was found in eight (0.7%) patients in 1170 inguinal surgical procedures [842 (72%) inguinal hernia or hydrocele, 328 (28%) undescended testes] (Fig. 1).

All eight males were diagnosed as having undescended testes (%2.4). The mean age of these patients was 3.2 years (range 1–16 years). All of the small, dark yellow nodules (2–4 mm in size) were excised for histopathological confirmation of the diagnosis. Histological sections showed adrenal cortical tissue but no medullary tissue (Fig. 2).

**DISCUSSION**

EAT has been reported during inguinal exploration mainly for inguinal hernia and hydrocele or undescended testes. The incidence of EAT is 1–9.3% when it is detected incidentally in children, mostly among males. EAT has been found more often during orchidopexy than during the high ligation of an inguinal hernia, based on reported cases [1–8]. In our series, eight cases of EAT were detected during inguinal exploration. The eight males were undergoing orchidopexy, as typically reported in the literature.

EAT occurs mostly in males, and its occurrence rate is significantly higher in
those with undescended testes. The development of EAT may reflect the embryological events that take place during adrenal and gonadal growth, with its detection most often occurring during exploration of the inguinal canal and retroperitoneal region during orchidopexy rather than during a standard high ligation for inguinal hernia or hydrocele [1, 3, 6, 7]. Microscopically, inguinal EAT consists almost entirely of adrenal cortex and only very rarely of medullary tissue [1–8]. Likewise, the EAT of our patients consisted only of adrenal cortex.

The excision of EAT is recommended when found incidentally during surgical procedures in the inguinal region in children, whereas routine exploration for the detection of EAT is not indicated.

CONFLICT OF INTEREST
None declared.

REFERENCES
