

Impact of hydrocortisone treatment on clitoral size during first year of life in girls with congenital adrenal hyperplasia (CAH).

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Conclusions

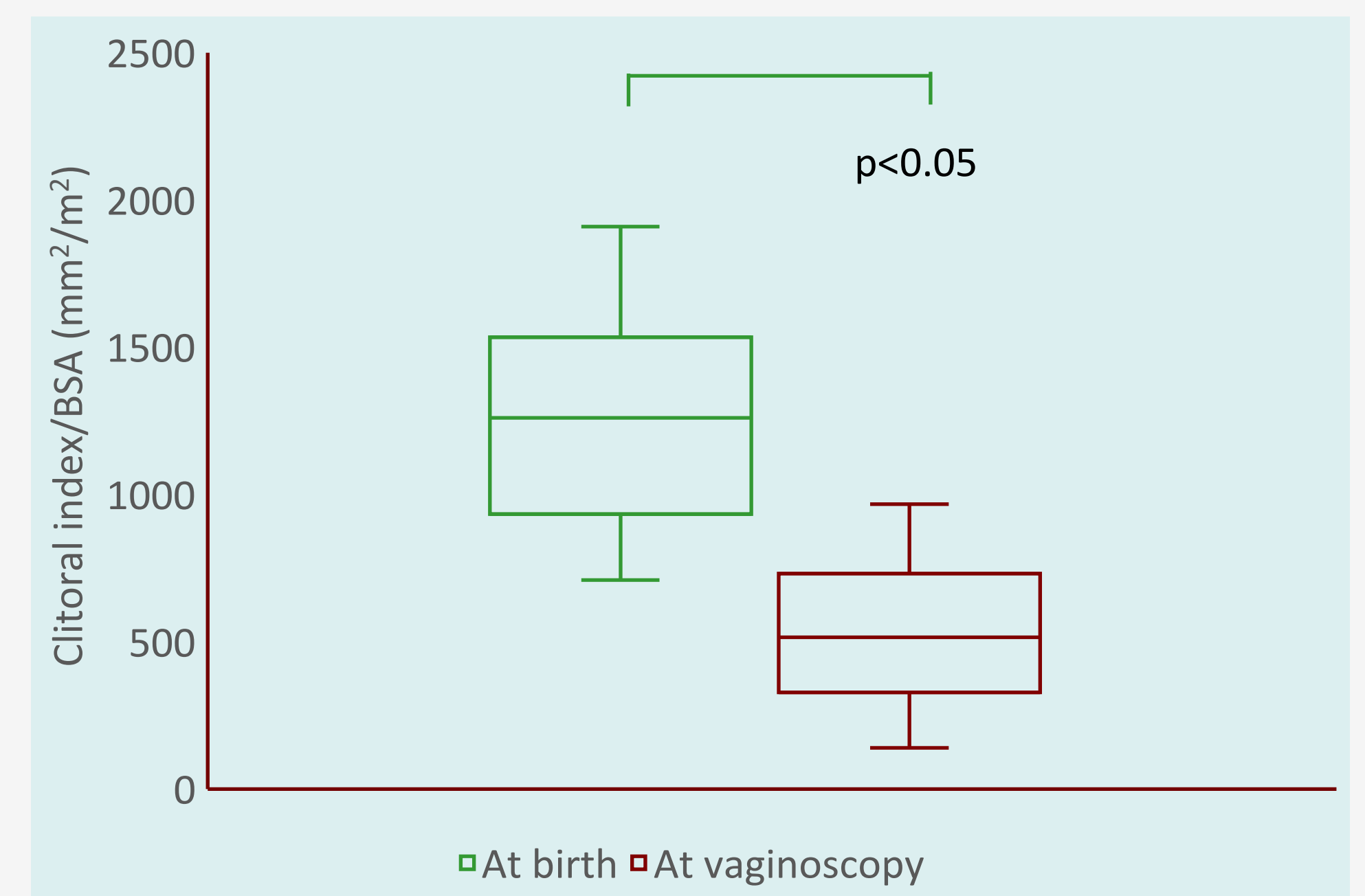
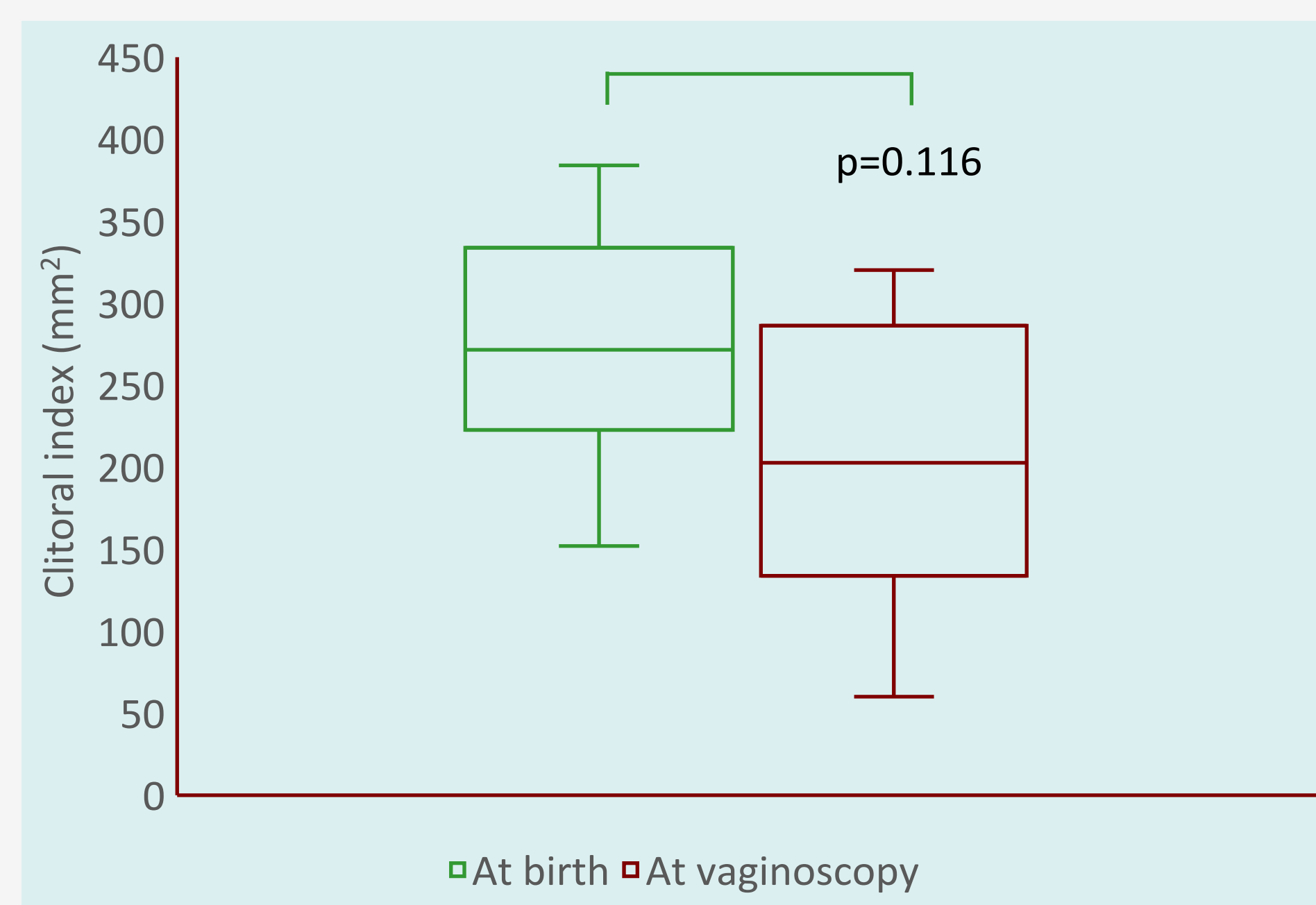
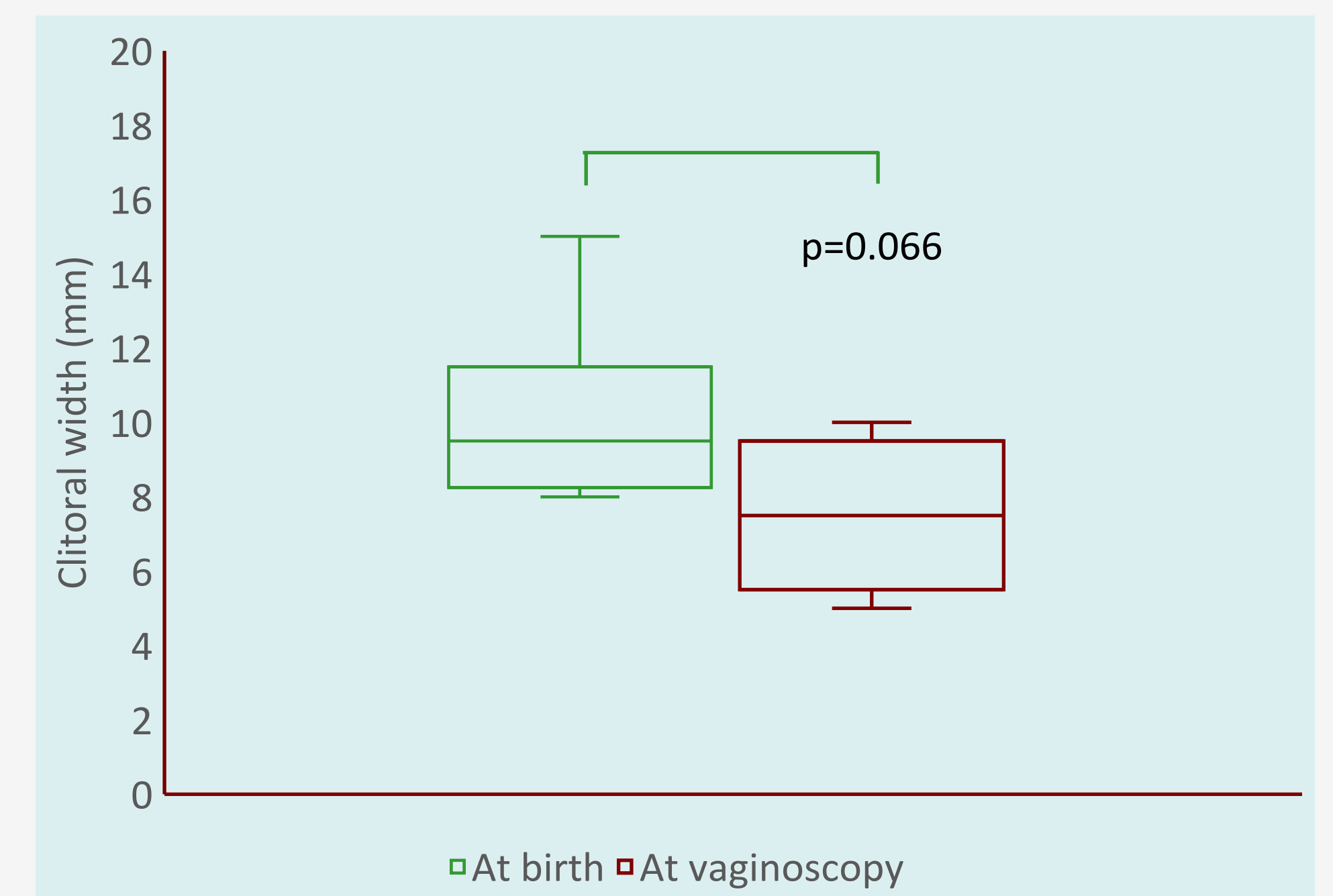
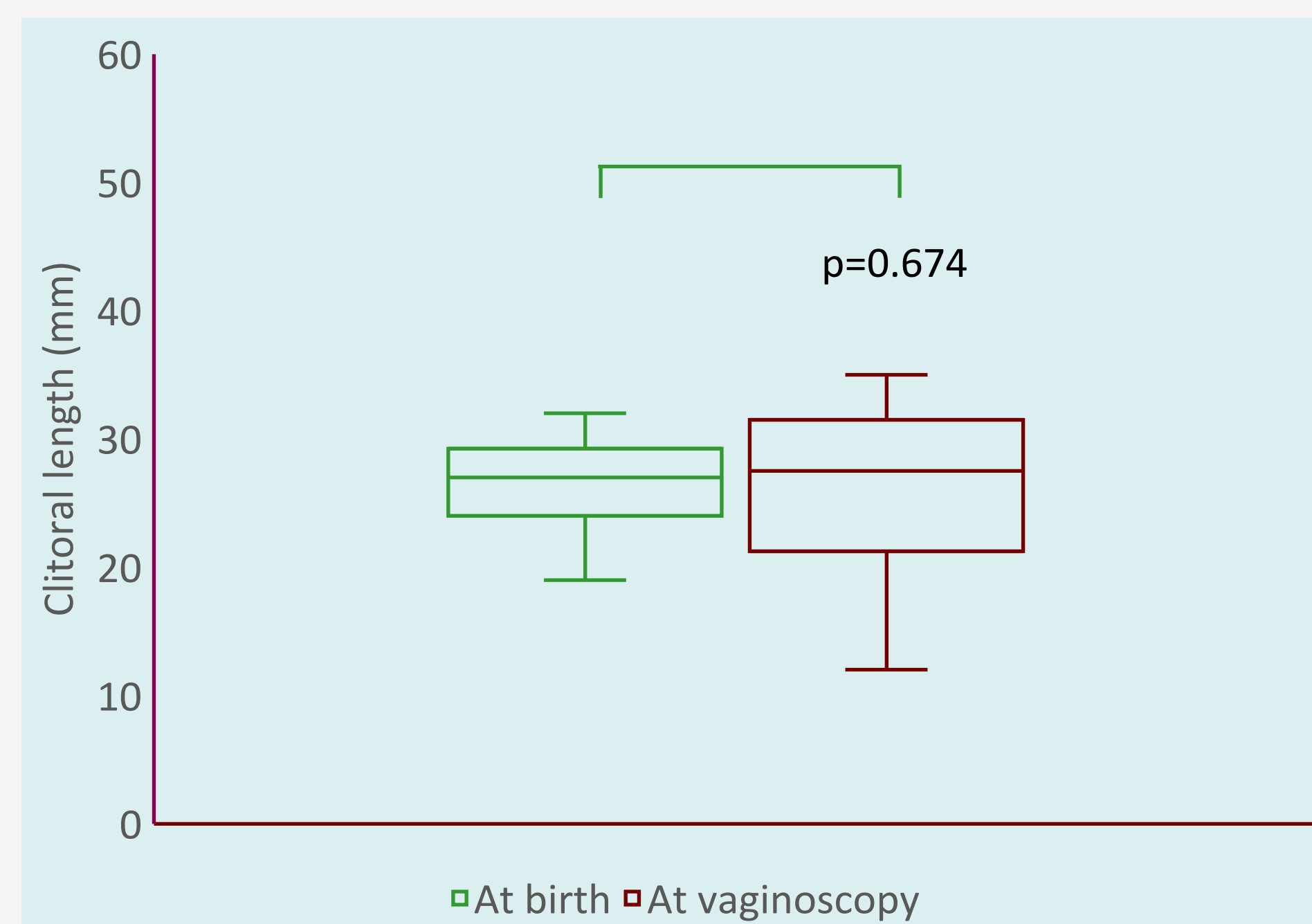
- Hydrocortisone treatment in currently recommended dosages (10 – 15 mg/m² BSA/day) is sufficient to prevent clitoral growth during the first year of life.
- Clitoromegaly becomes less marked as the girls grow.

Introduction

Early genital surgery has been the routine practice in virilized girls with severe forms of CAH for many years. During the last decade studies have shown genital surgery to have unsatisfactory effects on genital sensation and sexuality, and the current practice with early surgery has been questioned by patients and support groups as well as by clinicians and researchers. As surgery has been postponed in only few girls, published data on the effect of hydrocortisone treatment on clitoral size are sparse. In a recent French study, treatment with high doses of hydrocortisone (50 mg/m² BSA/day) significantly reduced clitoral size during the first years of life¹. In this study we aimed to investigate the effect of hydrocortisone treatment in currently recommended dosages (10-15 mg/m² BSA/day) on clitoral size during the first year of life.

Methods

Six girls with CAH due to 21-hydroxylase deficiency were investigated at birth, before start of treatment with hydrocortisone, and when vaginostomy was performed at a mean age of 0.7 years (range 0.4 – 1.0). Clitoral length and width were measured and the clitoral index was calculated from the product of the length and the width, and expressed as square millimetres. Anthropometric measurements were taken and body surface area (BSA) was calculated. To evaluate clitoral size in relation to general growth, clitoral index per square meter BSA was calculated. Hydrocortisone and fludrocortisone dosages at time of vaginostomy were recorded.



Results

- The changes in clitoral length (26.3 mm (range 19.0 – 32.0) vs. 25.7 mm (range 12.0 – 35.0), p=0.674), width (10.3 mm (range 8.0 – 15.0) vs. 7.5 mm (range 5.0 – 10.0), p=0.066) and clitoral index (273.3 mm² (range 152 - 384) vs. 201.7 mm² (range 60 – 320) , P=0.116) were not significant.
- There was a significant reduction in clitoral index per m² BSA (1264 mm²/m² (range 709 – 1909) vs. 534 mm²/m² (range 140 – 967), p< 0.05).
- The mean Hydrocortisone dose was 11.2 mg/m² BSA/day, (range 9.3 – 12.6), and the mean Fludrocortisone dose was 199.0 microgram/m² BSA/day (range 58 – 453).

Discussion

In this small observational study hydrocortisone treatment in currently recommended dosages was sufficient to prevent clitoral growth during the first year of life. Clitoral index per square meter body surface area showed a significant decrease, indicating that clitoromegaly becomes less marked as the girls grow.