

Hypospadias: a transgenerational effect of diethylstilbestrol?

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ABSTRACT:

BACKGROUND: In 2002, an increased risk of hypospadias was reported for sons of women exposed to diethyl-stilbestrol (DES) *in utero*, suggesting transgenerational effects of DES. The aim of this study was to further assess the association between parental DES exposure and hypospadias in a case-referent study.

METHODS: Cases with hypospadias were retrieved from the hospital information system. Referents were recruited via the parents of cases. Both parents completed postal questionnaires. Associations were estimated by odds ratios (OR) with 95% confidence intervals (CI). Additionally, conditional logistic regression analyses were performed for a matched subset of parents.

RESULTS: The final database included 583 cases and 251 referents. In the initial analyses, an indication was found for an increased risk of hypospadias when mothers were exposed to DES *in utero*: OR = 2.3 (95% CI 0.7-7.9). Conditional logistic regression resulted in a stronger risk estimate: OR = 4.9 (95% CI 1.1-22.3). Paternal exposure to DES did not increase the risk.

CONCLUSIONS: The results confirm an increased risk of hypospadias when mothers were exposed to DES in utero. However, the excess risk appears to be of much smaller magnitude than in the 2002 study. Further research on the potential health risks for the third generation is of great importance.