

## PEDIATRIC UROLOGY

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### **Paternity after adolescent varicocele repair**

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*Pediatrics. 2004; 114: 1631-3*

**Objective:** Varicocelectomy has long been a therapeutic modality used in the treatment of male infertility. In the past decade, adolescent varicocelectomy has become a frequent procedure to preserve testicular growth and to help prevent future infertility. Because our clinical population includes a large portion of orthodox Jews who traditionally marry early and are forbidden to use birth control by religious law, we thought that by studying our patients, we might be able to accelerate our follow-up regarding paternity. In addition, we wanted to learn whether adolescent varicocelectomy might have any negative impact.

**Methods:** Questionnaires inquiring as to the marital and paternity status, postoperative course, and complications were sent to 50 patients who had undergone a unilateral or bilateral varicocele repair during adolescence and who were at least 21 years old at the time of this review. In addition, a careful chart review was performed to examine the perioperative and postoperative parameters of each respondent.

**Results:** Of the 43 responses (86% response rate), 18 of 18 patients who had attempted to father a child were successful. The remaining 25 were not married or had never attempted to father a child. In the paternity group, 10 of the fathers had undergone an Ivansissevich repair; the remaining 8 had a Palomo repair. Sixteen of the 18 had unilateral varicocelectomies, and 2 underwent bilateral repairs. Of those with a unilateral varicocele, the indication for surgery in 10 was a grade 2 to 3 varicocele associated with a > 20% volume difference when compared with the right testicle. Three had 10% to 20% volume loss, whereas the remaining three had unusually large grade 3 varicoceles without concurrent volume difference.

**Conclusions:** Varicocelectomy in the adolescent population has been proposed as a therapeutic intervention to preserve both fertility and testicular growth. Although not showing a cause-and-effect relationship, it is our contention that varicocelectomy in adolescence at worst does no harm and at best preserves fertility.

### **Editorial Comment**

The authors report on the follow-up of 50 patients who had undergone varicocele surgery and were at least 21 years old. 43 (86%) responded and of those, 18/18 who had attempted paternity had fathered a child. They conclude that “varicocelectomy in adolescence at worst does no harm and at best preserves fertility.”

This is a fascinating report by an excellent group. However, it is still best to remain skeptical about their conclusion. First, regarding the presumption that the surgery did not harm, there are several issues. 1) 7 patients did not respond. Can we presume that their results are the same as the responders? Probably not. 2) Three of the 18 had a recurrent varicocele and one of these required a second operation. 3) Similarly, three of the patients developed hydroceles (and again one required operative repair).

Regarding the suggestion that the patients benefited from the repair, there are also some issues. 1) Again, the non-responders may not have the same paternity as those that did respond. 2) There are no controls. We do not know the paternity rate of patients with the same varicoceles who are untreated. Indeed, we have no idea of the natural history of a varicocele in this population. 3) Eighteen of 18 is clearly a high rate of paternity (assuming the self-report is truly accurate), but this is a very small group. If there were a statistical comparison to a control group, a high rate of failed paternity would be needed to show a statistical difference. 4) Fifty patients were operated on, but we do not know how many adolescents with varicocele were seen. Presumably

these were the worst cases, but there are not data on presented. How many teens with normal fertility underwent unnecessary surgery?

Although we would all like to think that repair of adolescent varicoceles is beneficial in selected cases. However, a randomized prospective trial designed to prove its efficacy would be welcome.

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### **The outcome of prenatally diagnosed renal tumors**

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*J Urol. 2005; 173: 186-9*

**Purpose:** We assessed the incidence of perinatal morbidity and evaluated the outcome in children with prenatally diagnosed renal tumors in a retrospective multicenter study.

**Materials and Methods:** A review of the records of patients from 20 institutions identified 28 children with prenatally diagnosed renal tumors. Prenatal findings, clinical charts, and radiological, surgical and pathological reports were reviewed in this study.

**Results:** There were 26 congenital mesoblastic nephromas and 2 Wilms tumors. One or more complications were identified in 20 of the 28 cases (71%) during the perinatal period. Polyhydramnios was observed in 11 fetuses (39%), 2 presented with hydrops fetalis and 7 presented in acute fetal distress requiring emergency cesarean section, of which 1 died in utero before delivery. Median gestational age of the 27 neonates born alive was 35 weeks (range 29 to 39), including 13 (46%) who were pre-term (less than 34 weeks of gestation). Complications at birth included hemodynamic instability in 3 newborns, of whom 2 underwent emergency surgery, respiratory distress syndrome in 8 (30%) and hypertension in 6 (22%). Surgical complications occurred in 7 patients (26%), including tumor rupture in 1 and intraoperative bleeding with postoperative death in 1. At a median follow-up of 42 months (range 2 to 105) 26 of the 27 children were in complete remission.

**Conclusions:** Fetal renal tumors have an excellent oncological outcome but a high risk of perinatal complications. Prenatal diagnosis should allow planning the delivery at a pediatric tertiary care center to avoid a potentially life threatening condition in neonates in the first hours of life.

### **Editorial Comment**

Although neonatal renal tumors are rare, the authors report the outcome of 28 cases diagnosed prenatally. These tumors are thought to be benign based on the limited post-natal experience. However, the authors note a strikingly high complication rate, especially prenatally. Forty-six percent were born premature and a large number had hemodynamic instability, hypertension or respiratory distress. There were 7 major surgical complications. Although 26 of the 28 are doing very well at a mean follow-up of 42 months, the authors emphasize that when diagnosed in fetal life, the course of these patients is anything but benign.

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