

## CLINICAL INQUIRIES

From the Family Practice Inquiries Network

# When should a child with an undescended testis be referred to a urologist?

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### EVIDENCE-BASED ANSWER

Infants with an undescended testis should be referred between ages 6 and 15 months, since almost all who experience spontaneous descent do so by 6 months (strength of recommendation [SOR]: **A**, extrapolation from cohort studies).

The incidence of germ cell aplasia in undescended testes begins to rise at 15 months (SOR: **C**, extrapolation of observational studies); however, evidence is inconclusive that orchiopexy

at this age results in higher rates of paternity success (SOR: **B**, retrospective cohort study).

Orchiopexy may allow earlier detection of testicular tumors (SOR: **C**, expert opinion), but it has not been shown to reduce the risk of testicular cancer (SOR: **B**, retrospective cohort study) or improve 5-year survival rates for those patients diagnosed with testicular cancer (SOR: **B**, retrospective cohort study).

### CLINICAL COMMENTARY

#### Periodically evaluate a newborn's scrotum for either an undescended or reascended testicle

This Inquiry highlights 2 important considerations regarding the child with a cryptorchid testis. First, periodically evaluate the newborn and infant patient's scrotum for either an undescended or reascended testicle. In my practice at Oklahoma State University Family Medicine Residency, I ask residents to perform the scrotal examination at birth, at every well-child visit up to 1 year of age, and then yearly thereafter. During puberty, these

exams serve as opportunities to educate patients about testicular self-examination.

Secondly, as the authors indicate, there is some disagreement in the literature as to the risk of testicular cancer following orchiopexy for cryptorchidism. However, surgical repair is likely to facilitate regular testicular self-examination, which could increase the likelihood of detection of cancer during young adulthood.

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#### ■ Evidence summary

Three large cohort studies determined that cryptorchidism (**FIGURE**) is present at birth in approximately 3% of term infants (higher in preterm infants), with spontaneous descent occurring in two thirds of cases by age 3 to 6 months. One study<sup>1</sup> of

10,730 consecutive male term infants found cryptorchidism at birth in 2.7%, dropping to 1.22% by 6 months of age, but without further change at 1 year. A similar study<sup>2</sup> followed 6935 infant boys, finding cryptorchidism at birth in 3.7%, which decreased to 1% at 3 months and

remained unchanged at 1 year. A third study<sup>3</sup> found cryptorchidism at birth in 90 of 6414 (2.7%) infant boys. At follow-up, 45 of 90 had testicular descent at 1 month, 60 of 90 at 3 months, 67 of 90 at 9 months and at 1 year.

The 2 main indications for orchiopexy are potential avoidance of infertility and early detection and treatment of testicular cancer. A literature review<sup>4</sup> of fertility after orchiopexy for undescended testis found inconclusive results. While epidemiological and pathological data (testicular biopsy, hormonal analysis, and sperm counts performed after orchiopexy) predict diminished fertility potential for men with unilaterally undescended testes, studies evaluating paternity find no difference from normal men. Biopsy studies of undescended testes at the time of orchiopexy show increased incidence of germ cell aplasia with older age at surgery (0.5%, 2%, 20%, and 45% at 6, 12, 24, and 48 months, respectively).<sup>4</sup> A retrospective cohort study<sup>5</sup> found 87% successful paternity after orchiopexy for 24 patients with unilateral undescended testis and 33% success for 9 with bilateral undescended testes but there was no normal control group. The boys were aged 1 to 14 years (mean, 7 years) at surgery, and there was no relationship between timing of orchiopexy and paternity success.<sup>5</sup>

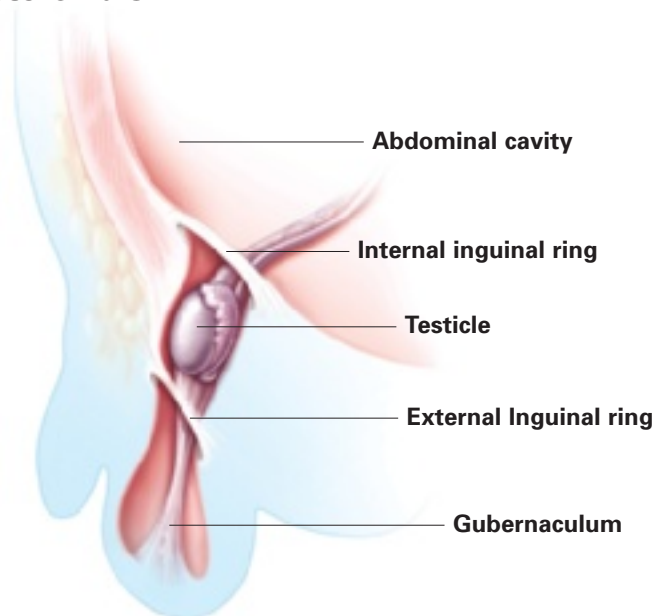
The benefits of orchiopexy for testicular cancer are also unclear; expert opinion suggests that orchiopexy may allow earlier detection of testicular tumors.<sup>6</sup> A cohort study<sup>7</sup> of boys with cryptorchidism showed an increased risk of testicular cancer (relative risk=5.2). However, risk did not decrease after orchiopexy in early childhood. A retrospective cohort study<sup>8</sup> of 137 men with cryptorchidism who developed testicular cancer found no difference in 5-year survival between those who had orchiopexy (at ages 2 to 42) and those who had not (61% vs 63%, respectively).

### Recommendations from others

The American Academy of Pediatrics policy section on urology says that spontaneous

## FIGURE

### Cryptorchidism



**In most cases of cryptorchidism,** the testis will be inguinal or prescrotal. A smaller number of cases are ectopic (have left the inguinal ring), abdominal, or absent.

ILLUSTRATION BY RICH LaROCCO

descent after 6 months is unlikely and recommends orchiopexy by 1 year of age.<sup>9</sup>

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### FAST TRACK

**Orchiopexy may allow earlier detection of testicular tumors, but it has not been shown to reduce the risk of testicular cancer**