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INVITED COMMENTARY

Male Infertility

Asymptomatic postpubertal male with palpable left varicocele and subclinical right varicocele

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With the widespread use of scrotal ultrasonography, more and more subclinical right varicoceles have been detected in postpubertal males with palpable left-sided varicocele.¹ A significant relationship between testicular growth arrest and adolescent varicocele grades has been documented,² thus indicating that a decrease in semen quality might occur later in life.³

On the other hand, the benefits of surgical treatment in all adolescents with varicocele remain equivocal.^{4,5} Besides symptomatic adolescent varicocele, ipsilateral testis growth arrest is an acceptable treatment indication. Traditionally, testicular growth arrest will be confirmed when ipsilateral testis is 20% smaller compared to the other side. In such cases, a treatment is recommended.⁶ However, there is no consensus on the definition of significant testicular hypotrophy. A range from 10% to 20% is described by different authors as a significant testicular size discrepancy.^{7,8}

There is still controversy about the value to repair isolated subclinical varicocele in infertile adults,⁹ and the meaning of repairing subclinical varicocele at pediatric age is even more debatable. In adolescents with palpable left varicocele and subclinical right varicocele, when there is obvious testicular asymmetry, we recommend bilateral varicocelectomy based on the following reasons:

(1) There is evidence suggesting that simultaneous repair of left clinical and right subclinical varicocele is beneficial in adults^{10,11} though contrary opinion exists.¹² (2) A significant proportion of subclinical adolescent varicocele may progress to clinical varicocele rather than spontaneous resolution.¹³ Moreover, sports may be associated with the progression of subclinical varicocele.¹⁴

In the presence of left clinical and right subclinical varicocele but no testicular asymmetry, the benefit of surgical intervention is unknown due to the lack of definition of normal testicular size in adolescents. It should be noted, however, that Chen *et al.* reported possible hypoplasia of right testicle in the presence of left varicocele and, therefore, comparison of bilateral testicle sizes may potentially miss some patients with testicular hypoplasia who may benefit from surgical intervention.¹⁵ We incline to recommend surgical intervention to adolescents who present with the aforementioned given scenario. This is based on the fact that size comparison between testicles in the same individual may not be representative.¹⁶ Nevertheless, the potential

benefits and risks of surgery should be discussed in detail with the parents and the patient. In selected adolescents with varicoceles, semen analysis may be useful in decision-making¹⁷ though the normal range for adolescent semen parameters is lacking. Hormonal tests may be potentially useful for evaluation of testicular function in adolescents with varicocele and helpful in selecting patients for treatment.¹⁸

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