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Short Communication

Comparative Study of Testicular Volume in Children with Unilateral Cryptorchidism of Different Ages in the Tropical Province of China

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ABSTRACT

Cryptorchidism is one of the most common congenital developmental malformations of the urogenital system in children. It affects the growth and development of testis, leads to impaired spermatogenic function, and even causes infertility. Therefore, early treatment is needed. There are few studies on whether the testicular volume of children with cryptorchidism will change compared with the normal side or normal children. In this manuscript, objective data were obtained by comparing the testicular volume of children with cryptorchidism and normal children, suggesting that children with cryptorchidism should be treated with surgery as soon as possible.

Keywords: Cryptorchidism; Children; Surgery; Treatment

DESCRIPTION

Cryptorchidism affects the growth and development of testis, resulting in impaired spermatogenic function and even infertility, the risk of carcinonegesis is also significantly increased [1]. Since spermatogenic tubules account for 80%~90% of testicular mass, testicular volume reflects spermatogenesis to a large extent. Therefore, accurate measurement of testicular size and volume is of great significance for evaluating testicular functional status [2-4]. Unfortunately, there are still few studies on testicular volume in children with cryptorchidism. Due to the low probability of spontaneous descent after 6 months of birth, orchiopexy is currently generally recommended between 6 and 18 months [5]. But testicular volume in children with cryptorchidism has been less studied as to whether it is affected early in the life after birth. Therefore, I think it is of great significance for this study to compare the influence of unilateral cryptorchidism at different ages on children's testicular volume by measuring testicular volume. This study found that the testicular volume of children with cryptorchism was affected within one year, and there was no compensatory hypertrophy on the contralateral side. This result suggests that early intervention should be carried out in children with cryptorchidism.

Testicular development need appropriate temperature, when the testicle cannot normally descend into the scrotum, it cannot stay in a constant temperature environment, which will lead to the decline of testicular function and impair the development of spermatogenic tissues [6]. Mieusset believed that elevated body temperature caused by thermal environment might be a concomitant or major factor of impaired testicular function [7]. The human body can maintain a constant temperature inside the body through automatic adjustment, so as to avoid large changes due to changes in the temperature of the external environment. However, as mentioned above, temperature has a great influence on the testicle, and further research is needed to determine whether the testicle volume of children with cryptorchidism in tropical areas will change significantly.

CONCLUSION

In conclusion, objective data in this manuscript showed that the testicular volume of children with cryptorchidism was affected at the early stage of birth, and the results also suggested that surgical intervention should be carried out as soon as possible in children with cryptorchidism in order to protect the spermatogenic function of the affected side to the greatest extent.

There were no significant differences between the healthy side of left cryptorchid groups and right cryptorchid groups. There were significant differences in testicular volume among different age groups of the control group, while there were no differences in the cryptorchid groups.

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