

Comment on “Serum AMH concentration as a marker evaluating gonadal function in boys operated on for unilateral cryptorchidism between 1st and 4th year of life”

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To the Editor,

I enjoyed reading the original article “Serum AMH concentration as a marker evaluating gonadal function in boys operated on for unilateral cryptorchidism between 1st and 4th year of life” by Matuszczak et al. which appeared in *Endocrine*, doi: [10.1007/s12020-011-9551-5](https://doi.org/10.1007/s12020-011-9551-5) [1]. In this study, to test serum AMH concentration as a marker evaluating gonadal function in boys operated on for unilateral cryptorchidism, they collected patients with inguinal hernia served as controls, then they concluded that serum AMH concentration—a Sertoli cell marker evaluating gonadal function—was lower in boys with cryptorchidism than inguinal hernia operated upon between the 1st and 4th year of life; and this reflection of a Sertoli cell defect might subsequently be primary or secondary to testicular descent failure. They implied that serum AMH concentration was a good marker applying to evaluate gonadal function in boys with cryptorchidism. However, I would like to question whether it is appropriate for patients with inguinal hernia serving as controls because several studies have indicated inguinal hernia could affect the testis. Liu et al. [2] have pointed out that there was significant difference in testicle volume between the testis of two sides in boys with inguinal hernia, with the testicle on involved side larger than the healthy side, and it could be remedied by inguinal hernia repair. Orth and Towbin [3] have reported that for infants aged 3 weeks–6 months, 10 out of 50 patients with incarcerated inguinal hernia had associated testicular ischemia and showed a statistically significant increase in ipsilateral testicular size compared to the contralateral

testicle. In my experience, I had operated on 15 patients with incarcerated inguinal hernias aged 24–35 months from Feb 2008 to Nov 2010. Unfortunately, human studies have shown that ischemic testicular injury from an incarcerated inguinal hernia could lead to testicular atrophy and potentially decreased fertility [4]. Sertoli cell maturation is accompanied by increasing inhibin B, but declining AMH levels [5, 6]. So, AMH and inhibin B are clinically used to assess the presence and function of Sertoli cells during childhood. In my prospective study of 444 boys (aged 6 months–24 months), including 127 with left oblique inguinal hernia (hernia group), 132 with left cryptorchidism (cryptorchidism group), and 185 healthy boys (normal control), I found that for children aged 6–12 months, serum inhibin B concentration was highest in the normal control, followed by hernia group, and lowest in cryptorchidism group, while for children aged 13–24 months, serum inhibin B concentration showed no significant difference between the hernia and cryptorchidism groups, but both lower than the normal control; and the left testicular volume was largest in the hernia group, followed by the normal control and cryptorchidism groups [7]. So how about serum AMH in patients with inguinal hernia? Therefore boys with inguinal hernia serving as controls might conceal the constation, it would be better to recruit healthy boys as controls.

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