

## AUTHOR'S REPLY

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Looking for bladder exstrophy as a diagnosis, we found 356 cases in our database, which makes us one of the biggest centers of exstrophy-epispadias complex treatment in the world. Some patients are treated at our institution from the beginning while others are coming for further treatment after primary bladder exstrophy closure or because of complications and poor results of surgery performed at another institution. From the technical point of view it was not possible to include all 356 patients into our study, because we felt that a group of 100 cases was large enough to function as a representative group. All of the cases were chosen randomly from the database.

Bladder exstrophy is treated with staged reconstruction, which begins with primary closure, followed by urethral and penile reconstruction, and finally bladder neck creation. The primary closure is crucial because it involves not only bladder closure but also the necessity to rearrange the pelvic bones, pelvic floor muscles, and anterior abdominal wall layers. In newborns up to the third day of life, the primary bladder closure could be performed without osteotomy. At this age, the pelvic bones are elastic and it is possible to connect the pubic symphysis without osteotomy. However, we learned, that in case of a diastasis of 4 cm or more, it is better to perform osteotomy even if the baby is less than three days old. In older children, however, osteotomy is recommended independently of the distance of the pubic bones. Unfortunately, there are doctors who do not understand the role of osteotomy and they still perform exstrophy closure without this procedure. As a consequence of the wide diastasis of the symphysis, the results of primary closure are bad. Most often wound dehiscence is observed with re-exstrophy of the bladder. In other cases, the cicatricial hernia develops or extensive scarring occurs. Moreover, wide standing pubic bones make the proper reconstruction of external genitalia impossible and predispose to vaginal

prolapse in adulthood. That is why we decided to call attention to primary bladder exstrophy closure and the value of osteotomy in this procedure.

Pelvic osteotomy combined with bladder exstrophy closure has only one aim – to connect the pubic bones. The reconstruction of the symphysis allows the pelvic floor muscles and abdominal rectus muscles to close up. Approximation of the pubic bones is achieved with iliac osteotomy independently of the method of osteotomy. The most popular is posterior iliac osteotomy, which was described for the first time in 1958 by Schulz and practically unchanged until today. In some cases with big diastasis of the symphysis, even if the osteotomy is performed, the pubic bones are connected with tension, which predisposes to wound dehiscence and bladder prolapse. That is why re-exstrophy may occur in all centers even those doing osteotomy in all patients. However, closure without osteotomy always gives tension. The discrepancy between the results achieved in our center and in the others (failure rate 19% to 56%, respectively), derives evidently from the osteotomy that was, or was not, performed together with bladder closure (Tables 2, 3, 4, & 5).

Our experience and results push us to conclude that it is better to close the exstrophy together with iliac osteotomy in all age groups, even in the newborn less than three days old – and this is a new message. Furthermore, if we should perform osteotomy regardless child's age, let us postpone the surgery for about one month to let the baby stay with the mother and allow the rest of family to develop emotional relations. Although the delay of operation should not be longer because of epithelialization of the bladder mucosa.

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