Commentary: Management of hypospadias

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Commentary on: Recent advances in understanding/management of hypospadias [F1000Prime Reports, 2014]

Snodgrass and Bush have presented a remarkable long-term series on the one stage tubular incised plate repair, i.e. TIP or Snodgrass repair, to correct hypospadias. It was originally described for distal hypospadias and with time Dr. Snodgrass has extended its indications to more proximal defects and redo repairs. We all can learn from Dr. Snodgrass' tenacity in carefully documenting what he has done at each surgery in a registry, in an effort to improve results. Along the way, Dr. Snodgrass has modified his approach and gives credit to those who have influenced these changes. One such example is the credit he has given to Japanese surgeons; when Dr. Snodgrass watched them performing a Snodgrass repair and noticed how aggressive they were in freeing up the flaps to make them large to make them generous and to facilitate a tension-free closure. This makes for better distal urethral coverage, less glans dehiscence and a less frequent retrusive meatus. Dr. Snodgrass subsequently adapted this approach to his own repair and with improved results. I can verify this approach as I have become more and more aggressive in fashioning glans flaps over the past two decades. My approach has been to make deep parallel incisions in the glans when outlining the glanular urethral plate and undermine the flaps when necessary so that the glans flaps end up unrestricted and lying flat just like an open book with a broken binding. Sometimes a slightly angled longitudinal incision needs to be made at the inside base of the flaps in order to further break and flatten the "binding".

It was Lowell King who popularized tubularizing the urethral plate in a one-stage repair leading to a succession of subsequent reports by other surgeons as regards not removing this valuable tissue and that some examples of chordee are produced only by the skin. Dr. King, however,

only brought the meatus to the base of the glans [1]. In 1995 Van Horn and Kass reported on 166 cases of hypospadias repair based on King's approach but they extended the urethroplasty to include the glans plate and sulcus as well with advancing the meatus to the distal tip of the glans, as illustrated in drawings within the article [2]. They called the repair the "GITUP" (glanuloplasty and in situ tubularization of the urethral plate) procedure. While the majority of repairs were for distal hypospadias, 9% were mid shaft and 5% penoscrotal. Five years later, and with more experience, Kass and Chung reported on another 142 children, but now with a 1.7% fistula rate following distal repair and 7.7% following more proximal repairs [3]. Evidently, even though Snodgrass published one year earlier than Kass, both series lend evidence to the likelihood that these two surgeons were independently developing their repairs over a number of years before they were published. With Dr. Snodgrass' midline longitudinal incision through the entire length of the plate, the use of King's original repair was further extended to include those with narrower plates. It is important to keep in mind that not all urethral plates need to be incised, especially when the plate is soft, elastic, and wide. In fact Dr. Kass does not find it necessary to incise the plate in more than 90% of the distal hypospadias repairs that he performs. He has also been using large glans flaps since conceptualizing the GITUP repair and reports that, as a result, he has not had any instance of separation of the glans closure (Dr Kass, personal communication, 2014). Personally, I have incised the plate in approximately 90% of my cases.

We all learn from registries, even retroactive reviews of these registries. As surgeons, we improve our own techniques by going through continuous modifications. Registries help us to compare our results over time and as well to share our findings in the literature with our colleagues. Surgeons fortunate enough to have large series of any

particular surgery, for the sake of our specialty, should feel obligated to share their experience. Dr. Snodgrass obviously is a proponent.

The small glans, as Dr. Snodgrass has discussed, is still a challenge. Dr. Snodgrass' approach certainly has made more glans grooves usable for tubularization and has simplified the approach to hypospadias.

Abbreviations

GITUP, glanuloplasty and in situ tubularization of the urethral plate.

Disclosures

The author declares that he has no disclosures.

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