Reply to Dr. Snodgrass' letter to the editor

To the Editor,

My paper that Dr. Snodgrass alluded to reports the experience with 129 patients who presented with obstructive urethral symptom/signs following tubularized incised plate repair of hypospadias. These children had the following in common: 1) No obstructive problems before hypospadias surgery. 2) They all had TIP technique to repair their hypospadias. 3) The ability to pass an 8 Fr catheter without difficulty (excluding anatomical stenosis or stricture). 4) These obstructive symptoms resolved completely after reconstruction of a new wide urethra.

Fistula and stenosis are well recognized complications after any technique used for hypospadias repair. The standard approach to exclude stenosis is to pass an 8 Fr catheter [1] through the new urethra in children less than 4 years. If the catheter passes without difficulty, this means that the child has no stenosis. This was true before the introduction of the TIP technique. Nowadays, the author and many other surgeons that perform hypospadias repair encounter many children following the TIP who complain of FUO despite the ability to pass an 8 Fr catheter. We have a commitment to our children and our colleagues to report this complication and techniques to correct it successfully.

The author will respond systematically and objectively to each point that Dr. Snodgrass mentioned in his letter to the editor:

- The paper mentioned clearly that 129 patients presented with FUO out of 263 referred with complications after TIP repair and NOT multiple failed repairs or any other type of repair. As clearly mentioned in the manuscript, these included 32 that presented with dysuria and 97 with recurrent fistula. Twenty patients had more than 30 cc of residual urine after micturition. Eighteen had increased bladder wall thickness and two had reflux which resolved 6 months or less after reconstruction of a wide new urethra.
- The reader should suspect FUO in every child who had TIP repair when the fistula recurs after closure and the surgeon can pass an 8 Fr catheter without difficulty.
- The majority of children included in the study (96 children) were less than 3 years of age, therefore uroflow was not a valid option. Uroflowmetry was performed in all cooperative toilet trained children (19 children) contrary to what Dr. Snodgrass claimed. Although Dr. Snodgrass believes that Uroflowmetry is frustrating in children and is of uncertain significance and unclear meaning [1], yet, he claims in his letter that "it is an objective test to diagnose obstruction after hypospadias surgery". Should we ignore the child's distress and agony if he has normal uroflow? Should we operate on a child without symptoms or problems simply because he has a flat uroflow curve?
- Regarding cystoscopy, as mentioned in the manuscript and very well explained in Fig. 4, the problem is the cystoscope would open the deep groove and gives the false impression that the urethra is wide. I have patients where the surgeon performed cystoscopy and said that the urethra is wide but the child has posterior urethral valves. He could not explain why these obstructive symptoms did not appear before the TIP repair or why they resolved completely after reconstruction of a wide new urethra.
- There are many diseases (Hirschsprung's, HIV, hepatitis C) and conditions that were discovered long before an easy, simple diagnostic test was identified. That urethrography is the only objective test for diagnosis does not mean that FUO after TIP does not exist. We are committed to care for our children and not put our heads in the sand and ignore the children's problems and say it will get better in a year or two as some surgeons have told parents.
- The urethrogram presented in the paper is of a child who had FUO and did NOT have glans dehiscence as Dr. Snodgrass suggests. When there is dehiscence of the wound as he claims, there should be no obstruction and performing urethrography is not indicated.
- The symptoms of FUO usually persist but will NOT get worse with time, simply because the urethra will regain the original caliber before incision of the plate and stop at that point. It may get slightly better over the years similar to the result obtained when we dilate any stenosis regularly.
- FUO is a unique complication of TIP. Patients following Mathieu repair may develop stenosis (like any other hypospadias repair) but certainly not FUO (either the urethra is wide enough to pass an 8 Fr catheter or not).
- Dr. Snodgrass mentioned in his letter that he has experienced only one instance of stenosis in 426 boys who had TIP repair for distal hypospadias. One must wonder why Dr. Snodgrass' results following the TIP technique in Dallas are different than when he operates in other countries. I have documents of several patients, operated by him who required regular dilation for 6 months and developed a fistula or complete wound disruption. A standard question I encounter in hypospadias workshops is "I have read the TIP technique and I have carefully watched Dr. Snodgrass operating live. How come I have 25%–30% complication rate after TIP repair and Dr. Snodgrass reports only a 2% complication rate?" Chrzan et al. [2] reported a long term complication rate of 35% after TIP technique for distal hypospadias. It is not a theoretical concern that the urethral plate incision scars and contracts producing a stenosis. It is a documented fact shown in the patients' pictures presented in the paper in Figs. 1 and 2 and is also documented by other authors [3,4].
- Dr. Snodgrass has asked, "Does not the normal urethra recoil after micturition?" This is true but those with a normal urethra do not complain of dysuria and do not seek medical help even if it is thousands of miles away. There is also a difference between expansion due to voiding and expansion only with calibration (an elegant term Dr. Snodgrass has introduced in hypospadias literature to describe dilatation).
- How could Dr. Snodgrass justify routine calibration and cystoscopy under general anesthesia in his patients [5] when they have no problems or complications as he claims?
- Dr. Snodgrass' attitude and letter to the editor are not unique or limited to this paper. Any surgeon who writes objectively about his honest experience with the TIP technique receives a similar letter to the editor from Dr. Snodgrass.
- The increasingly discouraging results of the TIP technique are evidenced by comparing 3 surveys. In 2005, Cook et al. reported that more than 89% of surgeons preferred the TIP technique for distal hypospadias [6]. In 2011, Springer et al. reported that only 71% of surgeons perform the TIP technique to correct distal hypospadias [7]. In 2013, Steven et al. reported in a world survey that less than 60% still perform the TIP repair for distal hypospadias [8]. The decline suggests the surgeons' increasing dissatisfaction with the TIP repair .
- A fair and objective assessment of the TIP technique was reported by Dr. Keating (one of the original describers of the incision of the urethral plate) [9] who wrote in his response to "one" of Dr. Snodgrass' letters to the editor [10]:

  "Hypospadias remains a challenge for even the most experienced surgeons. I choose to ask for the TIP what it can provide. The technique is ideal for some distal hypospadias — no more, no less. It is not the universal panacea for the anomaly. That is the best 'tip' I could offer...." *"One wonders how many cases of stenosis and strictures are experienced by groups reluctant to report adverse results".*

- I would like to thank Dr. Snodgrass for his letter which helps to further clarify the evidence and message of the paper. I would like also to thank the editor of the Journal of Pediatric Surgery for his

objective attitude and publishing Dr. Snodgrass' letter and criticism of the editor, reviewers and the author of the paper though unjustified.

Ahmed T. Hadidi
Hypospadias Center, Pediatric Surgery Dept.,
Emma and Sana Offenbach hospitals,
Max-Planck Str. 2, Seligenstadt, Germany
Tel.: +49 174 205 6905; fax: +49 6182 8430293
E-mail address: ahmedthadidi@yahoo.de

http://dx.doi.org/10.1016/j.jpedsurg.2014.07.004

References

[1] Snodgrass W, Macedo A, Hoebeke P, et al. Hypospadias dilemmas: a round table. J Pediatr Urol 2011;7:145–57.
[2] Chrzan R, Dik P, Klijn A, et al. Quality assessment of hypospadias repair with emphasis on techniques used and experience of pediatric urologic surgeons. Urology 2007;70:148–52.
[3] Holland A, Smith G. Effect of the depth and width of the urethral plate on tubularised incised plate urethroplasty. J Urol 2000;164:489–91.
[4] Eassa W, He X, El-Sherbiny M. How much does the midline incision add to urethral diameter after tubularied incised plate urethroplasty? An experimental animal study. J Urol 2011;186:1625–30.
[5] Snodgrass W, Bush N. Tubularised incised plate proximal hypospadias repair: continued evolution and extended application. J Pediatr Urol 2011;7:2–9.
[6] Cook A, Khoury A, Neville C, et al. A multicenter evaluation of technical preferences for primary hypospadias repair. J Urol 2005;174:2354–7.
[7] Springer A, Krois W, Horscher E. Trends in hypospadias surgery: results of a worldwide survey. Eur Urol 2011;60:1184–9.
[8] Steven L, Cherian A, Yankovic F, et al. Current practice in pediatric hypospadias surgery; a specialist survey. J Pediatr Urol 2013;9:1126–30.
[9] Rich MA, Keating MA, Snyder HM, et al. Hinging the urethral plate in hypospadias meatoplasty. J Urol 1989;142:1551–3.
[10] Keating MA. Reply to letter to the editor. Urology 2008;71:358.

Letter to the Editor

To the Editor,

Stroud et al [1] report formulas based on body surface area to predict optimal central venous catheter (CVC) length for insertion via the subclavian vein in pediatric patients. While placement of percutaneous subclavian catheters by surgeons and intensivists are likely on the decline with the increased use of image-guided centrally and peripherally placed central catheters by interventional radiologists, these findings are still useful, if unproven in a prospective fashion. The authors do not, however, provide data for patients less than 3.2 kg in weight, an important population in whom CVC placement can be tricky.

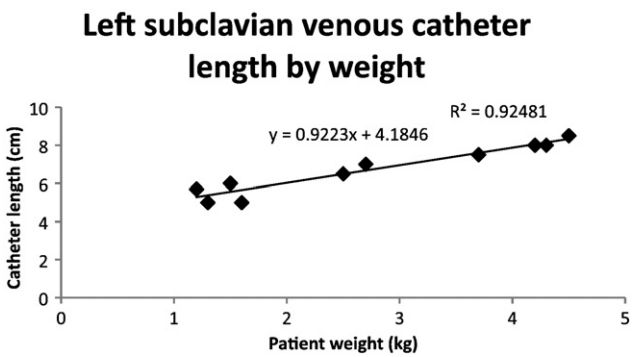

Fig. 1. The distance from the left subclavian vein central venous catheter insertion site to the right atrial/superior vena cava junction in 10 neonates, ranging in weight from 1.2 to 4.5 kg. Linear regression for catheter length (cm) derivation based on patient weight (kg) is shown. cm, centimeter, kg, kilogram.

During my pediatric surgery fellowship, I performed a similar, though limited, study on CVC placement in neonatal intensive care unit patients. Using only weight, I derived the following quite simple formula for CVC length from the left subclavian vein approach: length (cm) = wt (kg) + 4 (Fig. 1). This formula (not published) has proven quite accurate and useful over the years.

David Rothstein MD, MS
Pediatric Surgery, Women and Children's Hospital of Buffalo,
219 Bryant Street, Buffalo NY 14222
Tel.:1 716 878 7301; fax:1 716 888 3850
E-mail address: drothstein@kaleidahealth.org

http://dx.doi.org/10.1016/j.jpedsurg.2014.07.016

Reference

[1] Stroud A, Zalieckas J, Tan C, et al. Simple formulas to determine optimal subclavian central venous catheter tip placement in infants and children. J Pediatr Surg 2014; 49:1109–12.

Reply to Letter to the Editor

To the Editor,

Thank you for the opportunity to respond to the letter regarding our recent paper by Stroud et al titled 'Simple formulas to determine optimal subclavian central venous catheter tip placement in infants and children' (J Pediatr Surg 2014;49:1109-12).

Our study provides two simple formulas to estimate optimal subclavian central venous catheter (CVC) length, using an infraclavicular approach, based on laterality and body surface area. Dr. Rothstein correctly points out that our data did not include patients weighing less than 3.2 kg. This exclusion was intentional secondary to the infrequency of the subclavian approach in children this small given, in part, to the factors he mentioned. Therefore, we recommended using caution when applying our formulas to the neonatal population.

Andrea M. Stroud
Dartmouth Hickok Medical Center
Department of General Surgery
Hanover, NH 03755
E-mail address: Andrea.M.Stroud@hitchcock.org

http://dx.doi.org/10.1016/j.jpedsurg.2014.07.017