Re: Clean Intermittent Catheterization: Overview of Results in 194 Patients with Spina Bifida

A. Jeruto, R. Bransford, and D. Poenaru

Editor-in-Chief, AJPS

We have read the article "Clean Intermittent Catheterization: Overview of Results in 194 Patients with Spina Bifida" by A. Jeruto, R. Bransford, and D. Poenaru published in African Journal of Pediatric Surgery in March 2005. We would like to make several comments and corrections on this article.

First, the initial hospital and surgical management of the children was performed by Richard Bransford, MD. Dr. Augenstein initiated the bladder evaluation and CIC program in 1999 and trained the nursing staff involved in this study. The data presented in this article were gathered from 2001 through 2003 by Kimberly Augenstein, MD, and Virginia Simson Nelson, MD, MPH, during patient care and record reviews of charts from AIC Bethany Crippled Children's Centre of Kenya (BCCCK). Assistance in this data gathering was given to us by Agnes Jeruto. Data were collected under Institutional Review Board (IRB) approval from the University of Michigan Medical School. Data was analyzed with the assistance of Edward Hurvitz, MD, professor at the University of Michigan Medical School. These data were used without our knowledge or permission in the writing of this article.

Second, there were several factual errors in this article which need to be corrected. 371 infants and children with myelodysplasia were seen at BCCCK from February 1999-March 2003, with 87% of these having myelomeningocele (others had lipomeningocele, meningocele, or diastematomyelia). In the initial paragraph of the Patients and Methods section, routine bladder evaluation was said to include urinalysis as well as measurement of leak point pressure (LPP), post-void residual (PVR), serum creatinine, and the performance of renal ultrasound. In fact, urinalysis was not routinely included unless clinically indicated. Indications for starting clean intermittent catheterization (CIC) in infants and young children included LPP greater than 30 cm of water and PVR greater than 10 cc in the infant or based on age in older children [less than 10% of age appropriate volume or (age in years +2) x 30 cc], with urinalysis not part of the decision-making process. In older children, the social need for continence was an added factor in starting CIC. LPP greater than 30 was chosen rather than 40 because of the difficulty in obtaining accurate measurements and because children who initially had LPP's from 35-39 often had LPP's greater than 40 on repeat evaluations (see corrected table1). Medica-tions used for continence were limited by availability. Only imipramine was available in Kenya at the time for bladder management, even though oxybutinin and other medications were routinely used as an adjunct to CIC in western countries. Imipramine was not used in infants due to safety concerns. Prophylactic antibiotics were not used in our protocol. We feel our relatively low incidence of recurrent urinary tract infections justifies this approach which also minimizes the risk of developing antibiotic resistance.

In the results section, children presented at all ages, not just as infants for repair of their lesions. Of the 371 children seen for surgical closure, 99 were lost to follow-up and 72 died. Only 3 of these died from renal complications, the fourth cause of death, behind respiratory causes and CSF problems (both shunt and non-shunt). Of the 371 children, 249 had bladder studies and 167 met criteria to start CIC. One of the

Table 1:

LPP	Number (%)	# Subsequent Normal	# Subsequent >40	Initial Hydronephrosis	Hi PVR
>39cm	60 (24%)	5	-	2	49
35-39cm	31 (12%)	2	6	1	26
30-34cm	26 (10%)	14	1	0	11
<30cm	132 (53%)	130	2	5	41
Total	**249**	**151**			**

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major reasons bladder evaluations were not done in other patients was that the patients were seen in mobile clinics and were not able to travel to BCCCK for their bladder evaluation, either because of lack of transportation or lack of money for transportation. Continence was achieved in 76% of 59 patients over age 5 years for whom this was a goal.

This study looked at a large number of children, but the follow-up time was short. Results were also limited by the non-availability of oxybutinin and other bladder medications for this population. Catheters were supplied free of charge to all patients, as they were either donated or obtained through grants. We do agree with the final conclusion of the article which states that a CIC program is both feasible and effective in Kenya. We are hopeful that with improved patient follow-up we will be able to present strengthened data in the future.

In summary, there were factual errors in the data that was presented and this article used that data without the knowledge and permission of those who collected it and had a current IRB approval for its collection and use.

Sincerely,

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