



ELSEVIER



## Indiana pouch in children: A 15-year experience

Sujit K. Chowdhary<sup>a,\*</sup>, Katargadda L.N. Rao<sup>b</sup>,  
Deepak K. Kandpal<sup>a</sup>, Anupam Sibal<sup>a</sup>, Rajendra N. Srivastava<sup>a</sup>

<sup>a</sup> Department of Pediatric Urology and Pediatric Surgery, Indraprastha Apollo Hospital, Sarita Vihar, New Delhi 110044, India

<sup>b</sup> Advanced Pediatric Centre, Department of Pediatric Surgery, PGIMER, Sector 12, Chandigarh 160012, India

Received 21 September 2013; accepted 13 February 2014

Available online 19 March 2014

### KEYWORDS

Children;  
Cloacal exstrophy;  
Failed exstrophy  
repair;  
Indiana pouch

**Abstract** *Objective:* We report our experience with the Indiana pouch (continent urinary reservoir) in 12 consecutive children over the last 15 years and report their follow-up.

*Material and methods:* Twelve consecutive children, who underwent the continent urinary reservoir procedure in the form of an Indiana pouch, were prospectively enrolled in the study. All consecutive children who were referred to our service with multiple failed surgeries for exstrophy–epispadias repair, cloacal exstrophy, genitourinary rhabdomyosarcoma with residual disease in the trigonal area not amenable to partial cystectomy, and neuropathic bladder with nephrogenic metaplasia were included over the period 1997–2012. All these children were offered the same form of bladder substitution (Indiana pouch) as described by the Indiana group many years ago. Postoperative care was on a fixed protocol, and follow-up details recorded over the years. They were followed up for dry interval with clean intermittent catheterisation, social acceptance, and early and late complications.

*Results:* Out of these 12 patients (7 males and 5 females), eight patients had exstrophy–epispadias with multiple failed operations carried out elsewhere, cloacal exstrophy (2), residual rhabdomyosarcoma in the trigonal area with incontinence following chemotherapy (1), and neuropathic bladder with recurrent diffuse neoplastic polyposis (1). In the follow-up period of 1–15 years (median 24 months) all the patients had a dry interval of 4 h or more with clean intermittent catheterisation. One patient had wound dehiscence during the postoperative period and another required stomal revision 1 year after initial surgery.

*Conclusions:* The Indiana pouch is a reliable, safe, and effective form of bladder substitution. It can be reconstructed in a wide range of lower urinary tract disorders. In the vast majority of children with multiple failed surgical procedures for exstrophy–epispadias, the Indiana pouch

\* Corresponding author. Tel.: +91 981 844 8380.

E-mail address: [sujitchowdhary@hotmail.com](mailto:sujitchowdhary@hotmail.com) (S.K. Chowdhary).

is a safe, reliable, and reproducible procedure to provide a socially acceptable quality of life with a dry interval of 4 h.

© 2014 Journal of Pediatric Urology Company. Published by Elsevier Ltd. All rights reserved.

## Introduction

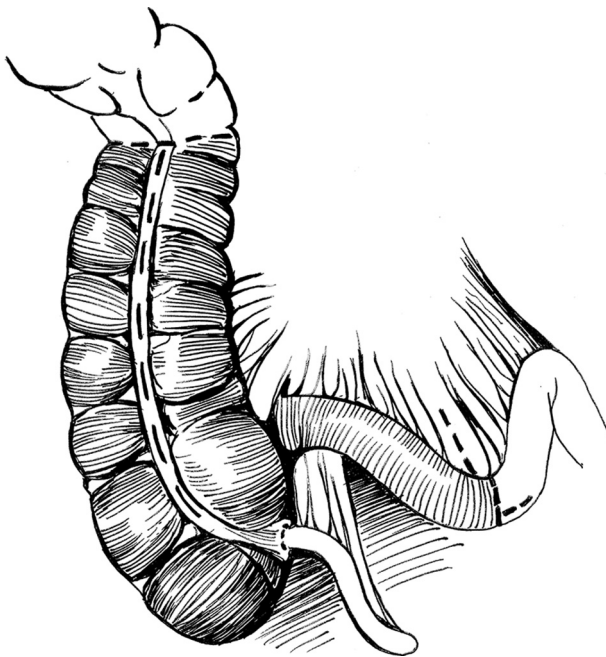
The continent urinary reservoir has emerged as an accepted procedure for catheter-based continence in children with complex lower urinary tract anomalies, where natural voiding and continence are not achievable. In long-term studies on follow-up of staged exstrophy–epispadias repair, continence with natural voiding is not achievable by the majority despite several operations. The proportion of patients who do achieve a 4-hour dry interval in the long term may vary between 30% and 40% [1]. The rest have to be dependent on catheter-based continence even in centres with long-term experience of these complex and difficult lower urinary tract malformations. Several surgical procedures on children born with this unfortunate condition means untold trial for the parents raising these children in the hope of achieving continence with natural voiding, which indeed may never happen in at least 50% of these children [2]. Several studies from Western literature have reported the high mean number of operations required to achieve voided continence and concerns regarding the sustainability of this success in long-term follow-up. This assumes special relevance in developing countries where it also means days away from work for parents for repeated admission to overcrowded hospitals. There are only a few case series of continent urinary diversion reported in

children [3,4]. We report our experience with the continent reservoir Indiana pouch in 12 children studied prospectively (Figs. 1–3).

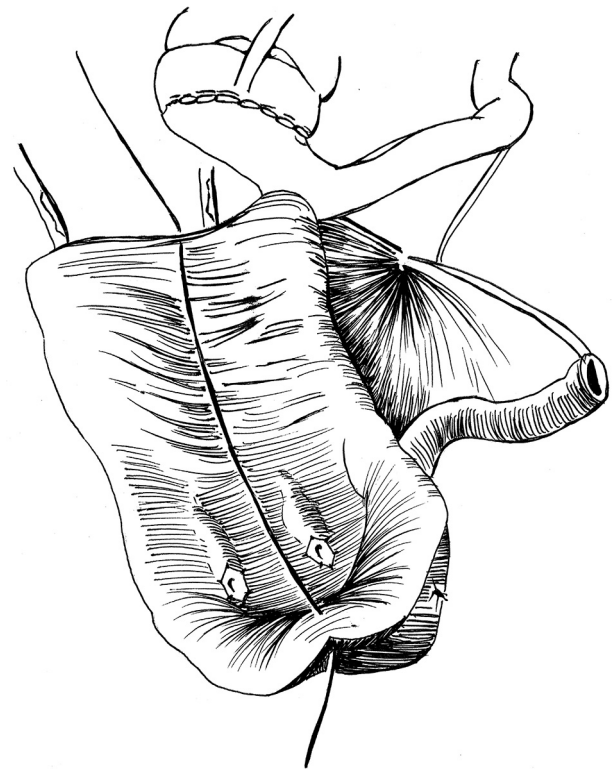
## Material and methods

All children who underwent continent urinary reservoir from 1997 onwards were recruited prospectively into the study. Between 1997 and 2012 there were 12 children who underwent the continent urinary reservoir procedure (Indiana pouch). There were seven boys and five girls, and the mean age was 5.3 years (range 1–14 years). Among these patients, eight had exstrophy–epispadias complex, two had cloacal exstrophy, one had neuropathic bladder, and another one had genitourinary rhabdomyosarcoma (Table 1).

Indications for Indiana pouch among the above patients included multiple failed surgeries for exstrophy–epispadias complex, residual disease in the trigone after chemotherapy for genitourinary rhabdomyosarcoma with persistent incontinence. The patient with neuropathic bladder had refractory high bladder pressure despite medical management, and several attempts were made at



**Figure 1** The isolated ileocolic segment based on ileocolic artery extending from 15 cm proximal to the ileocaecal valve up to the mid-ascending colon.



**Figure 2** Detubularised colon with both ureters reimplanted in the posterior caecal wall.

Download English Version:

<https://daneshyari.com/en/article/4162368>

Download Persian Version:

<https://daneshyari.com/article/4162368>

[Daneshyari.com](https://daneshyari.com)