Original Paper

Dorsal Dartos Flap in Snodgrass Hypospadias Repair: How to Use It?

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Abstract

Purpose: To introduce new technique for covering neourethra with dorsal dartos subcutaneous tissue in Snodgrass hypospadias repair. Material and Methods: The study included 26 patients with primary hypospadias, aged 2–22 years (average 7.86), operated from June 2002 to August 2006. Of the patients, 21 had distal, 3 midshaft and 2 penoscrotal hypospadias. The standard technique of tubularized incised plate (TIP) with double-layer covering of the neourethra by subcutaneous tissue was used in all cases of reconstruction. The mean follow-up period was 4.5 months (range 3–12 months). Results: Successful result of a normal-looking penis without fistula was achieved in all patients. One patient had meatal stenosis (3.84%) at the early postoperative period which was corrected by urethral dilatation of the external meatus at an interval of up to 2 months postoperatively. Conclusion: Our technique represents a reasonable option for utilizing dorsal dartos subcutaneous tissue in TIP urethroplasty. The neourethra is covered symmetrically with a double layer of well-vascularized tissue and the penis is kept without rotation. Redundancy of the flap and its excellent vascularization depend on the harvesting technique. Further follow-up and a larger number of patients are needed before a final conclusion can be made.

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Mahmoud Mustafa, Bassem S. Wadie, Hassan Abol-Enein

Abstract

**Purpose:** To introduce new technique for covering neourethra with dorsal dartos subcutaneous tissue in Snodgrass hypospadias repair. **Material and Methods:** The study included 26 patients with primary hypospadias, aged 2–22 years (average 7.86), operated from June 2002 to August 2006. Of the patients, 21 had distal, 3 midshaft and 2 penoscrotal hypospadias. The standard technique of tubularized incised plate (TIP) with double-layer covering of the neourethra by subcutaneous tissue was used in all cases of reconstruction. The mean follow-up period was 4.5 months (range 3–12 months). **Results:** Successful result of a normal-looking penis without fistula was achieved in all patients. One patient had meatal stenosis (3.84%) at the early postoperative period which was corrected by urethral dilatation of the external meatus at an interval of up to 2 months postoperatively. **Conclusion:** Our technique represents a reasonable option for utilizing dorsal dartos subcutaneous tissue in TIP urethroplasty. The neourethra is covered symmetrically with a double-layer of well-vascularized tissue and the penis is kept without rotation. Redundancy of the flap and its excellent vascularization depend on the harvesting technique. Further follow-up and a larger number of patients are needed before a final conclusion can be made.

Introduction

Tubularized incised plate (TIP) urethroplasty became the first choice of therapy in many kinds of hypospadias with a high success rate [1–5]. The most common complication seen in hypospadias correction is urethrocatheterous fistula [6–9]. The rate of fistula was reported to be 3.5% in the present series [3, 5] and 0–7% previously [1, 6]. Several procedures have been described for its prevention [10–12].

In this study, a new method is introduced for using dorsal dartos subcutaneous tissue to cover neourethra during hypospadias repair in primary cases.

Patients and Methods

A total of 26 patients with average age 7.86 years (range 2–22) were operated between June 2002 and August 2006 for primary hypospadias. The hypospadiac meatus was distal in 21 (80.76%), midshaft in 3 (11.53%) and penoscrotal in 2 patients (7.69%) (Table 1). Chordee were observed in 3 patients (2 with penoscrotal and 1 with midshaft hypospadias). The standard technique of TIP urethroplasty was the routine for hypospadias reconstruction in all the patients. The penis was degloved with a U-shaped incision extending along the edge of the urethral plate to healthy skin, 2 mm proximal to the hypospadiac meatus. The urethral plate was widened by a midline incision along its entire length. The urethral plate was then tubularized over a 6–0 or 8–0 stay using fine absorbable sutures (5/0 polyglactin). The dorsal subcutaneous flap was harvested from preputial skin and dissected from the midline, then both layers of flap were transposed to the vent...