Urinary Retention in an Adolescent Male with Partial Bladder Duplication, Complete Urethral Duplication, and Glans Duplication in the Coronal Plane

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Case

- We present the first case of glans duplication in the coronal plane with isolated genitourinary anomalies
Introduction

• Diphallia incidence 1: 5.5 million births
• Spectrum of presentations:
  • Complete duplication
  • “True diphallia”
  • Individualized treatment
  • Partial duplication
  • “Bifid phallus”
  • “Hemi phallus”
  • Unify corpora
Introduction

- Diphallia incidence 1: 5.5 million births
- Spectrum of presentations:
  - Pseudoduplication
  - “Pseudodiphallia”
  - Resection of tissue
  - Glans duplication
  - Individualized treatment
Introduction

• Glans duplication (GD) is the rarest form of diphallia
  – Occurs almost exclusively in the sagittal plane
  – Associated with extra-GU anomalies, particularly anorectal malformation

• We describe first case of GD in coronal plane with isolated GU anomalies

Isolated Urethral Duplication in Sagittal Plane
Patient Presentation

• 14 yo male
  – Initially a prenatal consult
  – Enlarged bladder
  – Hydronephrosis

• Newborn exam
  – Circ → GD
  – R hypospadiac, L orthotopic

• Initial RBUS normal
• Subsequent RBUS → large bladder, R HUN
• VCUG R Gr 4, L Gr 3 VUR and 2 urethras
Patient Presentation

- MRU showed partial bladder duplication and 3 corporal bodies
Management

• Timed voids and prophylactic antibiotics
  – For years → small residuals, no infections

• At age 14 years old, febrile UTIs and high residuals

• OR for appendicovesicostomy
Management

• Surgery for GD offered but family did not wish to pursue
Management

• Surgery for GD offered but family did not wish to pursue

Dominant hypospadiac right meatus

Stenotic left orthotopic meatus
Discussion

• Two similar cases
  – 4 year old (left): duplicated glans, R hypospadias, L orthotopic meatus; partial urethral duplication, and high anorectal malformation
  – 6 year old (right): single glans, duplicated urethra, large bladder, VUR; duplicated appendix, colon, rectum; R rectourethral fistula

Nunez et al., 1996

Salimi et al., 2017
Discussion

• Conditions exist on a spectrum

• Likely different embryopathies account for variations seen
  – Coronal duplication
  – Sagittal duplication
  – Ectopic duplication

• Individualized management including non-surgical

Jesus et al. 2017