

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

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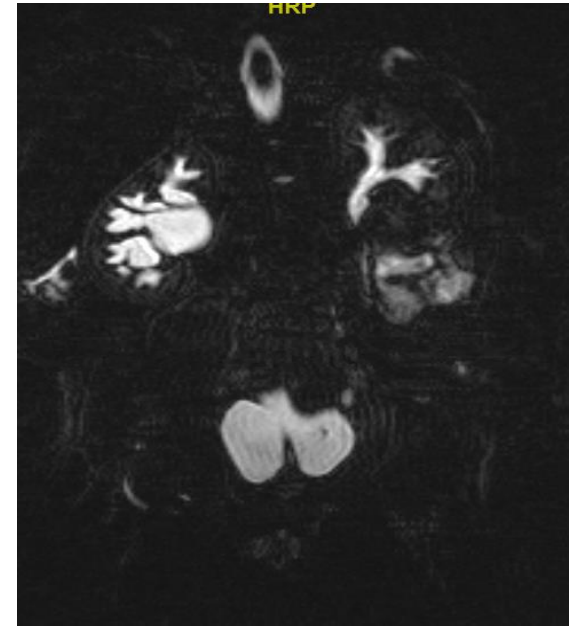
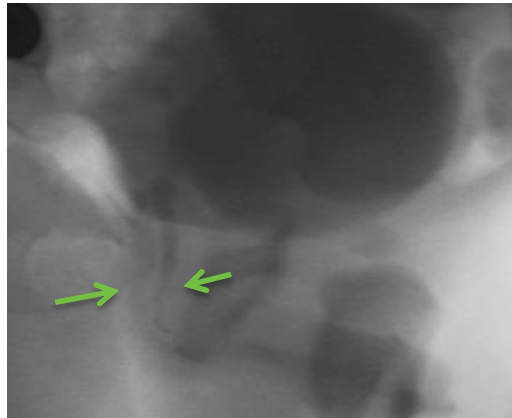
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# Case

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



# Introduction

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- 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

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- Diphallia incidence 1: 5.5 million births
- Spectrum of presentations:



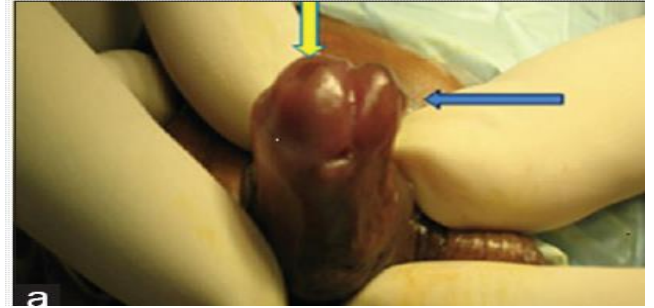
- Pseudoduplication
- “Pseudodiphallia”
- Resection of tissue



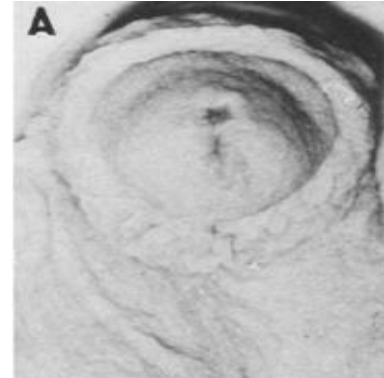
- Glans duplication
- Individualized treatment

# 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

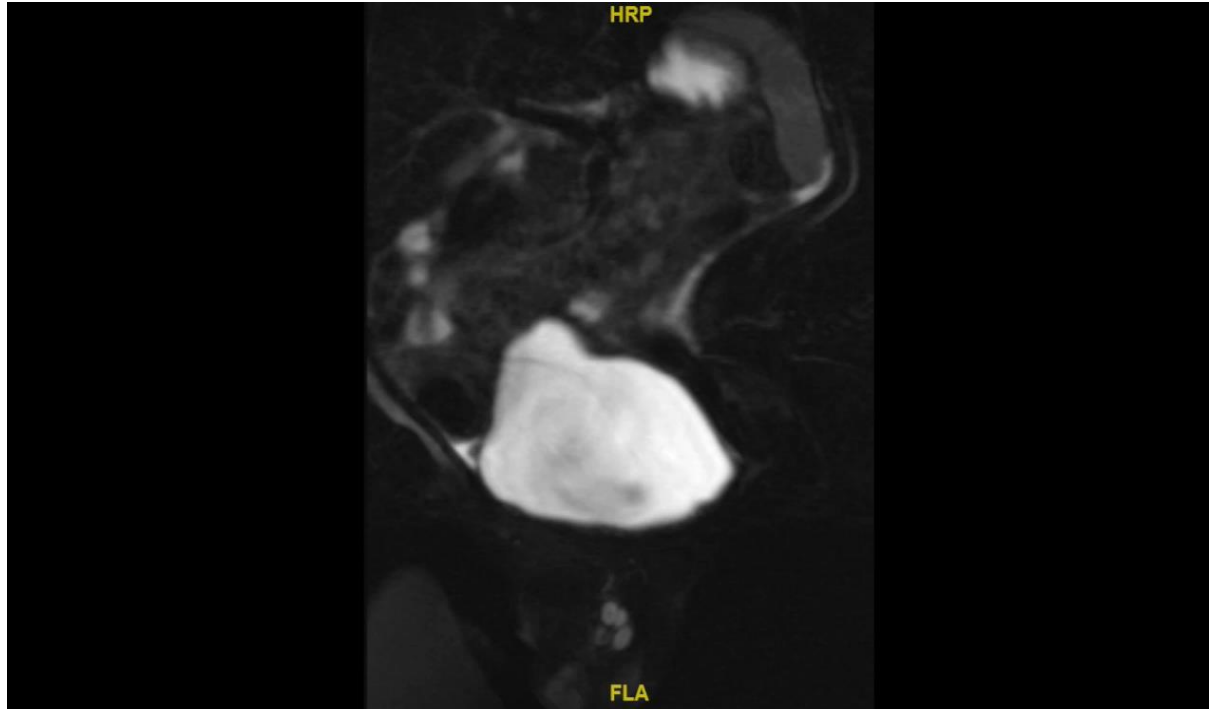
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- 14 yo male
  - Initially a prenatal consult
  - Enlarged bladder
  - Hydronephrosis
- Newborn exam
  - Circ → GD
  - R hypospadiac, L orthotopic
- Initial RBUS normal
- Subsequent RBUS → large bladder, R HUN
- VCUG R Gr 4, L Gr 3 VUR and 2 urethras



# Patient Presentation

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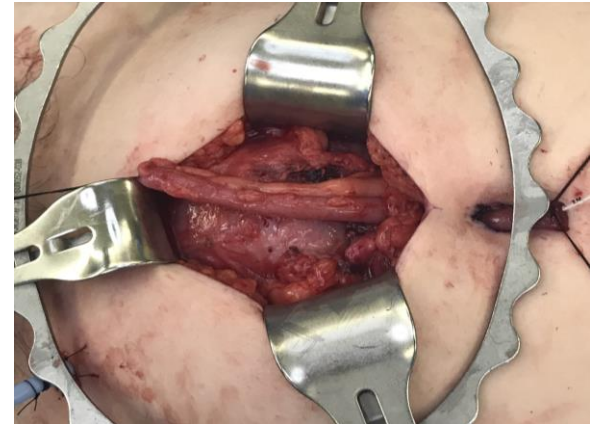


- MRU showed partial bladder duplication and 3 corporal bodies

# Management

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- 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

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



# Management

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

**Dominant  
hypospadiac right  
meatus**

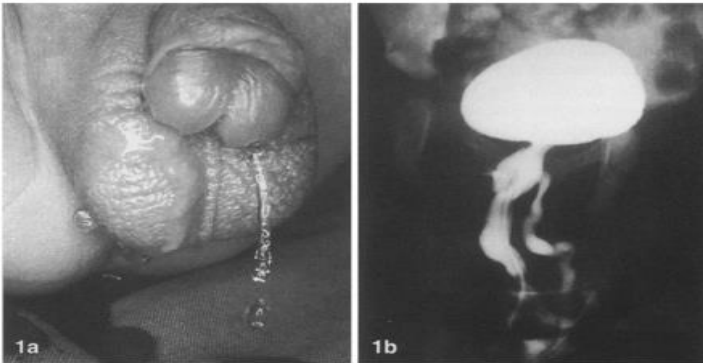


**Stenotic left  
orthotopic  
meatus**

# Discussion

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- 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

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- Conditions exist on a spectrum
- Likely different embryopathies account for variations seen
  - Coronal duplication
  - Sagittal duplication
  - Ectopic duplication
- Individualized management including non-surgical

