The Importance of Lower Urinary Tract Functions In The Follow-up And The Treatment of Vesicoureteral Reflux

Muhammed Hamidullah ÇAKMAK, Serdar MORALIOĞLU

University of Health Sciences Turkey, Hamidiye Faculty of Medicine, Department of Pediatric Surgery, Istanbul Zeynep Kamil Women and Children's Diseases Health Training and Research Center

Aim

Vesicoureteral reflux (VUR) is an important cause of morbidity in children. Some patients may have **lower urinary tract (LUT)** dysfunctions that don't have anatomical or neurological origin. In our study, the LUT functions of children with VUR and their effects on treatment approach and prognosis were investigated.

Methods

Patients diagnosed with VUR between January-2011 and December-2023 were retrospectively examined. Patients with LUT dysfunction were divided into two groups: those who didn't require surgery after treatment **(group-1)** and those who did **(group-2)**.

Results

Non-neurogenic LUT dysfunction was detected in 83 of 201 **(41.2%)** patients (59 female, 24 male).

The mean age of the patients at presentation was **6.28±2.28** years.

There were 39 patients in group-1 and 44 patients in group-2.

Four of the patients with LUT dysfunction had a surgery before admission.

The rate of **high-grade VUR** in group-2 was significantly higher (84.4% vs. 52.9%; **p<0.001**).

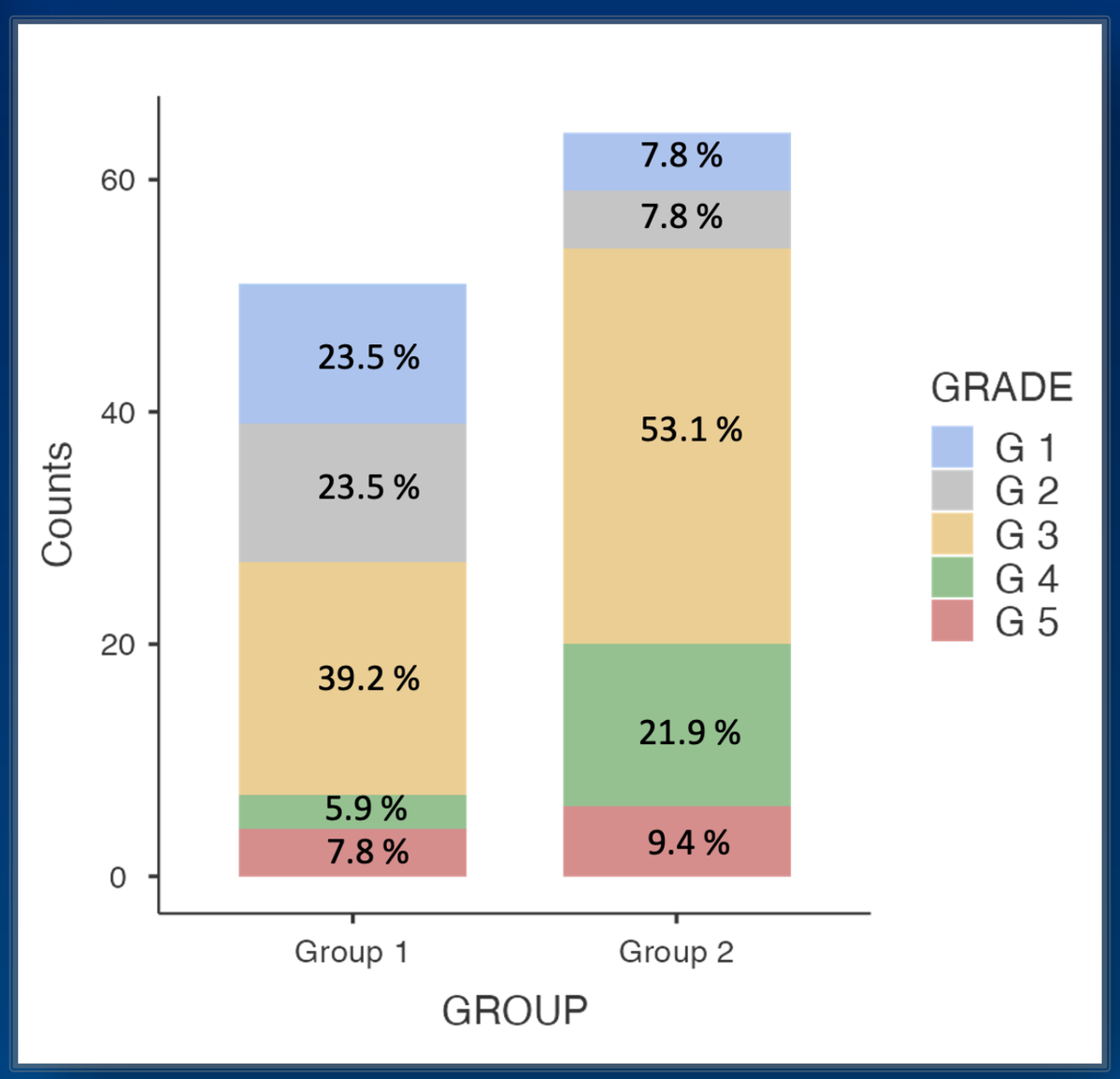
In group-1, after a median of **18 months** (2-96 months), resolution occurred in **35 of 50 units** (12 bilateral) and the degree of VUR decreased in **5-units**. VCUG wasn't performed after treatment in 10-units.

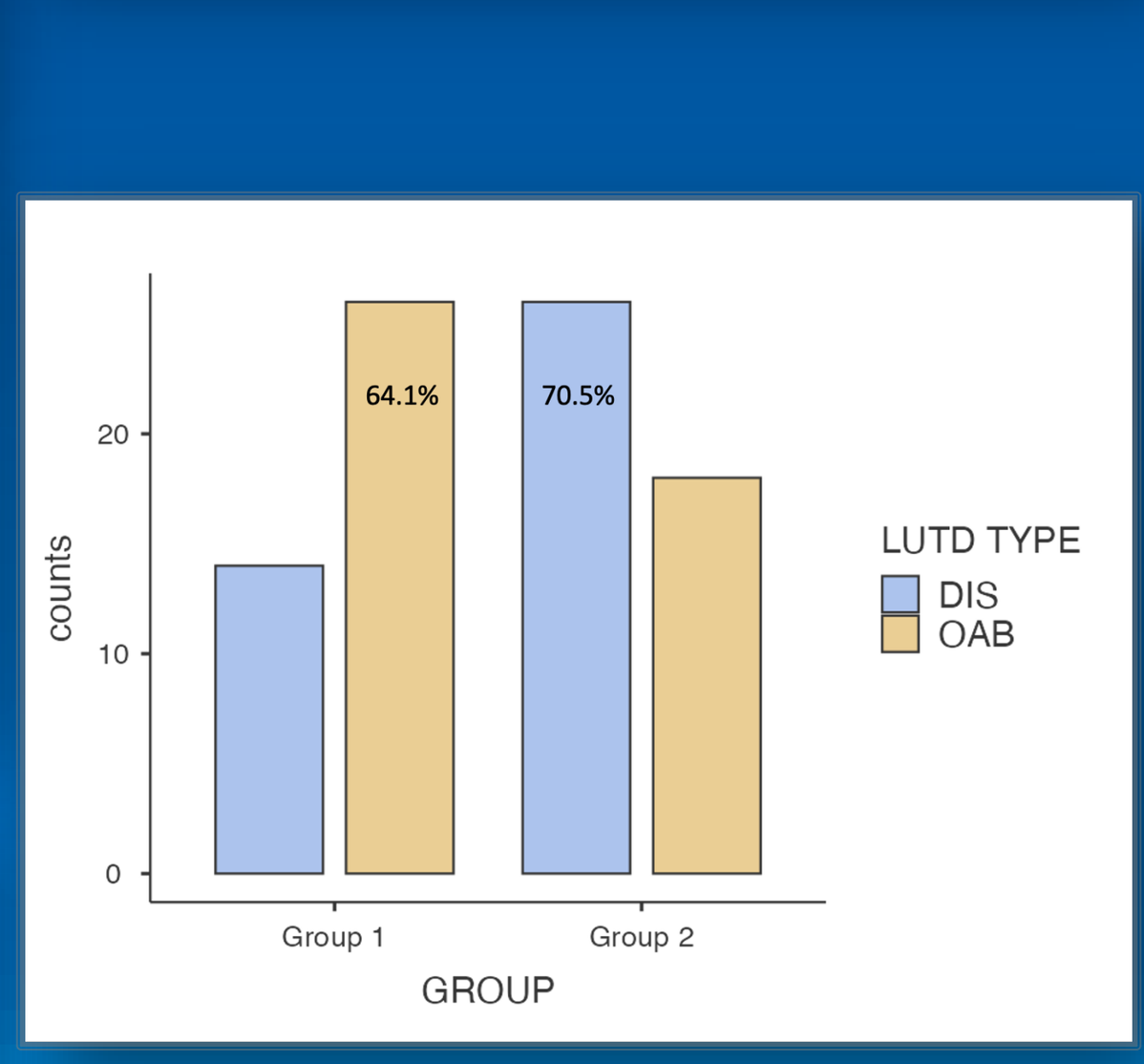
In group-2, surgery was performed after a median of **3.5 months** (1-108 months).

The most common type of LUT dysfunction in group-1 was **overactive bladder** (64.1%), and in group-2 **dysfunctional voiding** (70.5%) **(p<0.05)**.

Distal ureteral dilatation was ultrasonographically observed in 6% of the units after treatment in group-1 and 20% in group-2 **(p<0.01)**.

Syptom	Group 1	Group 2
Urinary Incontinence	**11** (28.2 %)	**7** (15.9 %)
UTI	**28** (71.8 %)	**35** (79.5 %)
HN	0	**1** (2.3 %)
Frequency	0	**1** (2.3 %)
Total	**39**	**44**





Conclusions

It is important to evaluate **LUT functions** in children with VUR and treat them if necessary. Treatment of LUT dysfunction eliminates the need for surgical intervention for some patients.