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# ROBOT-ASSISTED VESICOURETERAL REIMPLANTATION IN PEDIATRICS: INITIAL EXPERIENCE IN ECUADOR

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## 1 INTRODUCTION

Cohen, Leadbetter-Politano, and Lich-Gregoir techniques are the most commonly used in conventional surgery. In the last decade, minimally invasive procedures, such as those proposed by Riquelme et al., have been published. Robot-assisted surgery has gradually been incorporated into pediatric urology. However, in Latin America, experience with this technique is still limited, and there is little published information regarding its performance in public hospital settings.

## 2 OBJECTIVE

The present study aims to describe the surgical outcomes, complications, and efficacy of robot-assisted Lich-Gregoir vesicoureteral reimplantation in pediatric patients treated at the Hospital de Especialidades Carlos Andrade Marín (HECAM) in Quito, Ecuador, during the period 2021–2025.

## 3 METHODOLOGY

Observational, descriptive, and retrospective study of pediatric patients diagnosed with vesicoureteral reflux who underwent extravesical ureteral reimplantation using the Lich-Gregoir technique, assisted by a robot, performed by the Pediatric Surgery and Urology Service at the Hospital de Especialidades Carlos Andrade Marín from January 2021 to May 2025.

The following variables were evaluated:
Age, sex, VUR grade, operative time, hospital stay, and postoperative urinary tract infections.
***Data sources:*** medical records, operative reports

## 4 RESULTS

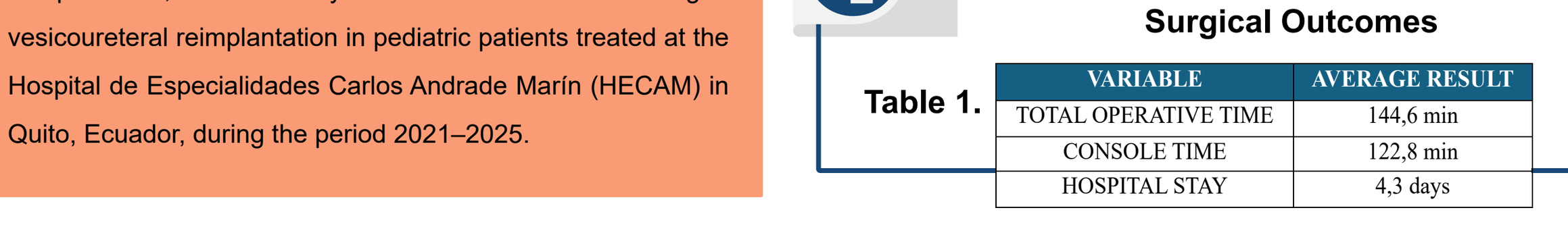
### Surgical Outcomes

**Table 1.**

| VARIABLE | AVERAGE RESULT |
|---|---|
| TOTAL OPERATIVE TIME | 144,6 min |
| CONSOLE TIME | 122,8 min |
| HOSPITAL STAY | 4,3 days |

## Table 2. Patient Characteristics

| SURGERY DATE | DIAGNOSIS | PROCEDURE | TOTAL OR TIME (MIN) | DOCKING TIME (MIN) | CONSOLE TIME (MIN) | AGE AT SURGERY | SEX | VUR GRADE | SUCCESS | POST-OP UTI | COMPLICATIONS | HOSPITAL STAY (days) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **7/12/2021** | Left Vesicoureteral Reflux, Grade III | Left Ureteral Reimplantation | 131 | 25 | 106 | 2 y 9 m | M | Left VUR Grade III | Yes | NO | NO | 4 |
| **18/7/2022** | Right Ureterovesical Junction Stenosis | Right Ureteral Reimplantation | 194 | 19 | 175 | 13 y 6 m | M | No Reflux | Yes | NO | NO | 5 |
| **7/11/2022** | Left Ureteral Reflux | Left Ureteral Reimplantation | 103 | 13 | 90 | 4 y 5 m | M | Left VUR Grade III | Yes | NO | NO | 3 |
| **28/11/2022** | Left Ureteral Reflux | Left Ureteral Reimplantation | 153 | 13 | 140 | 1 y 4 m | F | Left VUR Grade III | VUR GI | YES | NO | 5 |
| **6/3/2023** | Left Ureteral Reflux | Left Ureteral Reimplantation | 140 | 15 | 125 | 9 y 3 m | F | Left VUR Grade III | Yes | NO | NO | 4 |
| **16/12/2024** | Bilateral VUR | Left Ureteral Reimplantation | 135 | 15 | 120 | 11 y 2 m | F | Bilateral VUR, R: G I, L: G III | Yes | NO | NO | 3 |
| **13/1/2025** | Bilateral Vesicoureteral Reflux | Left Ureteral Reimplantation | 129 | 23 | 106 | 2 y 2 m | F | Bilateral VUR, R: G II, L: G III | - | NO | NO | 3 |
| **25/4/2025** | Left Vesicoureteral Reflux | Left Ureteral Reimplantation | 113 | 15 | 98 | 6 y 7 m | F | Left VUR Grade III | - | NO | NO | 3 |
| **19/5/2025** | Bilateral VUR | Right Ureteral Reimplantation | 150 | 20 | 130 | 3 y 0 m | M | Bilateral VU | - | NO | NO | 4 |



**Ureteral dissection** **Detrusor myectomy** **Ureteral reimplantation** **Detrusor raffia**

## 5 CONCLUSIONS

Robot-assisted extravesical Lich-Gregoir vesicoureteral reimplantation is a safe and effective technique with a low complication profile in the pediatric population. Its gradual implementation could represent a significant improvement [illegible]eral reflux in Latin America.

Hospital de Especialidades Carlos Andrade Marín

## REFERENCES

1. Esposito C, Masieri L, Steyaert H, Escolino M, Cerchione R, La Manna A, et al. Robot-assisted extravesical ureteral reimplantation (revur) for unilateral vesico-ureteral reflux in children: results of a multicentric international survey. World J Urol. 2018 Mar 1;36(3):481–8.
2. Chertin L, Kocherov S, Bakaleyshchik P, Baranov Y, Dubrov V, Kagantsov I, et al. Laparoscopic and Robot-assisted Laparoscopic Reimplantation for Lower Ureter Pathology. A Multi-institutional Comparative Study in 1343 Patients. Urology. 2024 Apr 1;186:166–71.
3. Neheman A, Strine AC, Concodora CW, Schulte ME, Noh PH. Outpatient robotic unilateral extravesical ureteral reimplantation in the pediatric population: Short-term assessment of safety. Journal of Urology [Internet]. 2019 Mar 1 [cited 2025 Jun 26];201(3):615–8. Available from: https://pubmed.ncbi.nlm.nih.gov/30218762/