

EVALUATION OF HYPERTROPHIC SCARS AFTER ROBOTIC-ASSISTED LAPAROSCOPIC SURGERY

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PURPOSE:

- Robotic-assisted laparoscopic surgery (RALS) offers superior precision and cosmetic outcomes compared to conventional laparoscopy. However, some patients present with hypertrophic scarring at incision sites postoperatively.
- This study aimed to retrospectively evaluate hypertrophic scar formation following RALS performed in our clinic between 2017 and 2023.

METHODS:

- A total of 56 pediatric patients who underwent RALS between July 2017 and September 2023 were retrospectively reviewed (*Figure 1*).
- Parameters analysed:**
 - **Demographics:** Age, Gender, BMI
 - **Operative variables:** Duration of surgery
- scar assessment: postoperative month 1 and year 1 incision scars were evaluated by three independent pediatric surgeons using:
 - Manchester Scar Scale (MSS)
 - Modified Scar Assessment Scale (MMSS)
 - Each patient's wound was scored for vascularity, pigmentation, thickness, skin height, and elasticity (*Figure 2*).

RESULTS:

- 20 patients (8 males, 12 females) had complete scar data and standardized photographs.
- Scars showed mild-to-moderate hypertrophic features in a subset of patients.
- Statistical analysis demonstrated no significant correlation between hypertrophic scar scores and independent variables (age, gender, BMI, operative time).
- Both MSS and MMSS yielded consistent results across observers.

Figure 1: Distribution of procedures undergoing robotic-assisted laparoscopic surgery

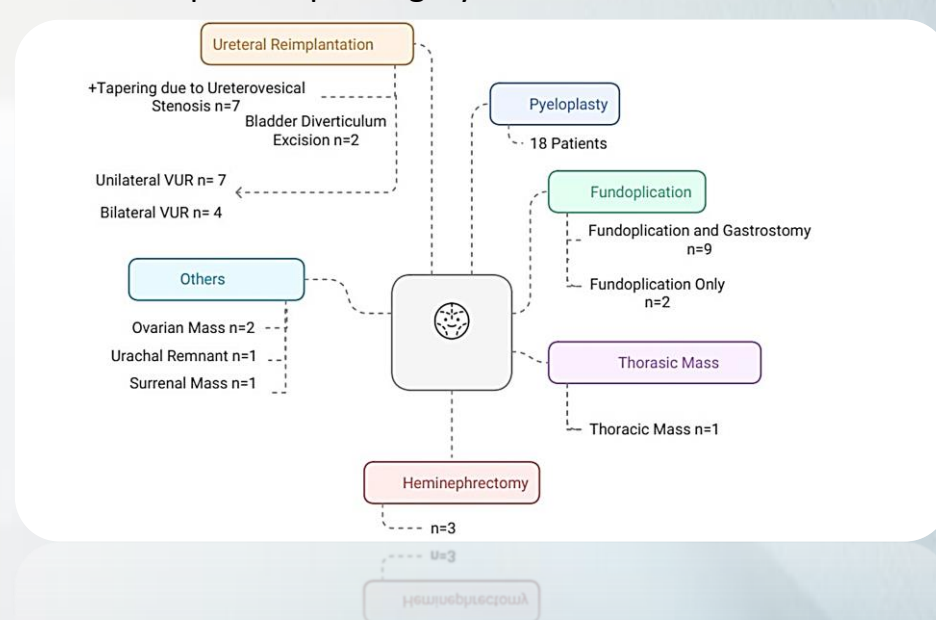


Figure 2: Postoperative hypertrophic scars following robotic-assisted laparoscopic surgery.



CONCLUSION:

- This is the first study to report hypertrophic scar formation at incision sites following robotic-assisted laparoscopic surgery in pediatric patients.
- Although no predictive factors were identified, our findings highlight the need for: Larger cohort studies, and histopathological or immunohistochemical investigations to better understand hypertrophic scar development mechanisms after robotic surgery.