

Robot Assisted Pyeloplasty in Children Less than 5 Years of Age

Introduction and Objectives: The advantages of robot assisted surgery are well known and include improved dexterity, motion scaling and operation under 3D vision. In this video we demonstrate the technique of robot assisted pyeloplasty in a 3-month-old child

Materials and Methods: We have done 6 pyeloplasties in children less than 5 years of age at our centre. The youngest was 3 months of age and had a weight of 4.5 kgs,. The procedure was performed using pediatric robot instruments (robotic shears, robotic needle holder and robotic hook). The initial port was a 12mm port for the robotic camera.

Results: The port was inserted using the open technique a preplaced facial sutures were taken which helped in keeping the port in position during the procedure. All the robotic ports (5mm) were inserted under vision. Once the ports were positioned the patient was turned with a forty degree tilt and the robot docked. The transmesocolic approach was used. A tacking suture to lift the pelvis was passed through the abdominal wall to lift the pelvis and identify the UPJ. The pelvis was dismembered. Once the posterior wall was sutured an antegrade stent was passed. This was followed by suturing the anterior layer. No drain was placed.

Conclusion: Robot assisted pyeloplasty is safe and feasible. Our initial experience suggests that it offers precise suturing under 3D vision which has a potential to offer superior functional outcomes in these small patients.

To view this video, please [click here](#)