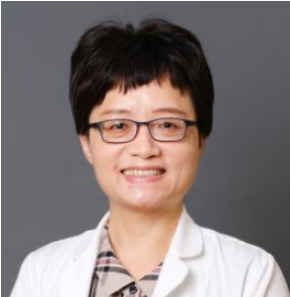


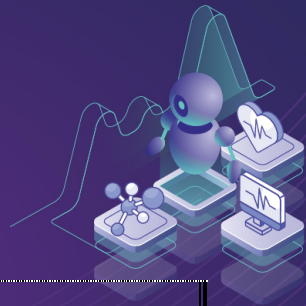
2025 臺中榮民總醫院院慶國際醫學研討會 TCVGH International Medical Conference

AI in Medicine

Future of Healthcare by AI



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Speech Title	Initial Clinical Experience with Da Vinci SP in Children	



Abstract(200 words) :

Background. Single-port (SP) robotic surgery is increasingly applied in pediatric patients, but early multidisciplinary experiences remain limited. Recent pediatric urology reports suggest feasibility and perioperative outcomes broadly comparable to multi-port platforms, with cosmetic advantages and a manageable learning curve.

Methods. We retrospectively reviewed our first five consecutive pediatric Da Vinci SP cases (June–August 2025) at a tertiary referral hospital. Procedures included: Heineke-Mikulicz pyloroplasty for pyloric web, radical nephrectomy, Roux-en-Y hepaticojejunostomy for choledochal cyst, and two ovarian teratoma resections. Primary endpoints: conversion, estimated blood loss (EBL), length of stay (LOS), and perioperative complications; secondary endpoints: operative and console times when available.

Results. Five patients (3 female, 2 male) ranged from 8 months to 18 years and 9.9–110 kg. One case (pyloroplasty) converted to open due to inaccurate duodenotomy site. Among completed SP cases, no intra- or postoperative complications were recorded. Reported EBL was 0–9 mL; LOS was documented as 6 days for the choledochal cyst case. Recorded operative times ranged 200–415 min; console times were 172–250 min. These early results align with emerging pediatric SP literature demonstrating technical feasibility (including upper-tract urology and hepatobiliary reconstruction) and low perioperative morbidity in carefully selected patients.

Conclusions. Pediatric Da Vinci SP surgery was feasible and safe across diverse procedures in our initial series, with one conversion and otherwise uneventful recoveries. Key considerations include patient selection (age, body habitus, working distance) and team familiarity with SP docking. Prospective registries and comparative studies versus multi-port approaches are warranted, especially for complex hepatobiliary and oncologic indications.

Keywords: pediatric surgery; robotic surgery; single-port; da Vinci SP; feasibility; perioperative outcomes