

Poster II, Miscellaneous, Robotics and Innovations I

PII1: PEDIATRIC ROBOTIC SURGERY: EPIDEMIOLOGICAL TRENDS IN REPORTING IN THE LAST DECADE

Kristi Sun*¹, and Amulya K. Saxena¹

E-mail: Kristi Sun — kristi.sun12@imperial.ac.uk

¹Department of Pediatric Surgery, Chelsea Children's Hospital, Chelsea and Westminster Hospital NHS Foundation Trust, Imperial College London, United Kingdom

Background Robotic surgery in the past decade found application in the pediatric population. The aim of this epidemiological study was to determine the global diversity of robotic surgery solely in the pediatrics based on peer-reviewed reporting in order to predict the trends in the past decade.

Materials and methods Pubmed was search for terms „laparoscopy“, „robotics“ and „children“. Data was collected with regards to the number of publications per year, peer-reviewed journal preference, origin of the publication, language of publication, population size and surgical spectrum. Inclusion criteria included publications with age range 0-19, with review articles excluded for this analysis. Articles were selected by 2 reviewers to minimize bias.

Results The literature search identified 104 articles published between 2005–2015 in 24 Journals with 2957 patients. The Journal of Urology had the highest publications (n=19); whereas among the pediatric specific publications the Journal of Pediatric Urology topped the list (n=19)- combined 36%. There was an exponential rise in the number of publications from 2005 (n=4) until 2010 (n=8) after which a plateau was observed with 10–14 publications between 2011–2015. With regards to the country of reporting, USA was predominant 75 (72%); followed by UK-4; India, Sweden-4 each; Germany-3; Spain, France, Hong Kong-2 each; and Saudi Arabia, Netherlands, Korea, Italy, Denmark, Brazil, Switzerland -1 each. Urological procedures dominated the list in 81 publications with 24 publications specifically reporting on robotic pyeloplasty. 21 publications reported application in infants <1 years of age.

Conclusions Epidemiological reporting trends in pediatric robotic surgery identified 105 articles in 2005-2015 published in 24 Journals. The USA led the list in peer-reviewed publications accounting for 2/3rd articles in the last decade. The 2 most cited Urology Journals accounted for 1/3rd of the total publications. There was an exponential rise in publications evident from 2005-2010 after which a plateau in reporting is observed.

Key words robotic surgery, pediatrics, epidemiology, demographics and trends