Aims: To evaluate the range and scientific nature of oral presentations in the Scientific Program of IAPSCON from 2014-18

Methods: The oral presentations in Scientific Program of IAPSCON from 2014–18 were tabulated and categorised as per: type of presentation, Paediatric Surgery related clinical subject heading, nature of the content and scientific quality as per Oxford levels of clinical evidence.

Results: Most oral presentations were in the form of Short papers. The most common clinical section and clinical condition presented were Urology and Hypospadias respectively. Clinical management followed by operative management represent the majority of the presentations when categorized by the type of content. Certain sections of clinical practice were not represented at all, notably anterior abdominal wall defects and gastro-oesophageal reflux. Most presentations (82.5%) are in Level 4 and 5 as per Oxford levels of clinical evidence, with Levels 1–3 accounting for 5% of presentations. Minimally Invasive Surgery (including robotic) accounted for 8.4% presentations.

Conclusions: This qualitative evaluation shows the variety of oral presentations and areas of greater and lesser interest in the conference meetings. It shows that the scientific quality of the presentations can be improved and highlights certain areas of clinical and scientific research for future consideration.

Keywords: Conference, IAPSCON, pediatric surgery

Introduction

The scientific program of any medical conference is the cornerstone of the meet. The scientific program is expected to represent the true nature of the problems that its members encounter in their clinical practice, in their research, and to reflect recent developments and trends in the field. Whether such purpose is served can be gauged by the variety and quality of the topics discussed. It is also expected to inform, educate, provoke debate on current practice, and provide direction to future developments in the field.

In this study, we aimed to evaluate the contents of the scientific program of the Indian Association of Pediatric Surgeons Annual Conference (IAPSCON), over a 5-year period, from 2014 to 2018 with regard to the quantity, variety, nature, and proportionality of different subject areas that were presented and discussed. The purpose was to ascertain if the IAPSCON Scientific Program contents were comprehensive and a true reflection of clinical practice and research as measured against a commonly acceptable standard list of subject topics in the field of Pediatric Surgery.

Methods

The Scientific Programs of all IAPS Conferences (IAPSCON) between 2014 and 2018 were evaluated and then categorized. For the purpose of this study, only oral presentations were assessed. All videos, e-posters, and poster presentations were excluded from...
this evaluation. All oral presentations were grouped into different sections and sub-sections of subject headings pertaining to the field of Pediatric Surgery; the section/chapter list from the standard textbook Ashcraft’s Pediatric Surgery, 6th Edition (ISBN 9781455743339) was used as the template for this categorization. Each presentation was also categorized by its type as per the Scientific Program (guest lecture/oration/long paper/short paper) and content (clinical management, operative management, point of technique, medicolegal, ethics, audit, research, overview, economics, governance, training, quality assurance, feedback, and survey); this list of content categories was created by the authors. All scientific presentations were also rated as per the Oxford Centre for Evidence-Based Medicine 2011 Levels of Evidence(1) for scientific quality.

RESULTS

During the period of this evaluation, there were a total of 783 presentations. Of these, 105 (13.4%) were continuous medical education (CME) presentations and the remainder 678 (86.6%) were non-CME presentations. The CME presentations were excluded from further evaluation as they were not considered to be representative of the clinical or scientific research activity submitted to IAPS, but were pre-selected presentations from experts and were selected for their established educational quality or need as determined by the Organizing Committee. Data regarding different aspects of the analysis are presented in Table 1. Most oral presentations are in the form of short papers (n = 495; 73%). Urology (n = 215; 31.7%) is the clinical section that has the highest number of presentations, and Hydrospadias (n = 60; 8.8%) is the most common clinical condition that is presented. Table 2 shows the frequency distribution of the five most commonly represented clinical areas during the period of this study. Clinical management (n = 153; 22.6%) followed by operative management (n = 145; 21.4%) represent the majority of the presentations when categorized by the type of content. Most presentations (n = 559; 82.5%) are in Level 4 and 5 as per Oxford levels of clinical evidence, with Levels 1–3 accounting for 5% (n = 34) of presentations and the remainder (n = 85; 12.5%) could not be categorized.

An evaluation of topics covered as per the clinical content headings in Ashcraft’s textbook shows that the following categories have not been discussed at all in IAPSCON for the past five years: bariatric surgical procedures in adolescence, breast diseases, fetal therapy, gastroesophageal reflux, head-and-neck sinuses and masses, Meckel’s diverticulum, nevus and melanoma, pediatric head trauma, pediatric orthopedic trauma, prune belly syndrome, renovascular hypertension, rhabdomyosarcoma, surgical infectious disease, thoracic trauma, congenital abdominal wall defects, congenital chest wall deformities, and extra-

| Program type | No | Clinical sections | No |
|--------------|----|-------------------|----|
| CME          | 105| Urology           | 215|
| Non-CME      | 678| Abdomen           | 195|
| Year         |    | Thoracic          | 76 |
| 2014         | 87 | Neoplasms         | 63 |
| 2015         | 114| General            | 48 |
| 2016         | 201| Trauma            | 42 |
| 2017         | 187| Inguinal/scrotum   | 18 |
| 2018         | 194| Other             | 21 |
| Presentation type | No | Level of evidence | No |
| Short paper   | 495| 1                 | 3  |
| Guest lectures| 146| 2                 | 3  |
| Long paper    | 129| 3                 | 28 |
|               |    | 4                 | 306|
|               |    | 5                 | 253|
|               |    | N/A               | 85 |
| Top 15 clinical conditions | No | Type of content | No |
| Misc          | 97 | Clinical management| 153|
| Hydrospadias  | 60 | Operative management| 145|
| Bladder and urethra | 46 | Overview | 125 |
| Biliary tract disorders | 42 | Outcomes | 93 |
| Anorectal malformations | 30 | Point of technique | 44 |
| Hirschsprung’s disease | 28 | Research | 41 |
| Esophageal atresia | 23 | Investigation | 30 |
| Congenital renal anomalies | 22 | Audit | 24 |
| Teratomas, soft-tissue tumors | 20 | Quality assurance | 9 |
| Neurosurgical conditions | 19 | Survey | 5 |
| Ureteral obstruction | 18 | Governance | 3 |
| Bladder and cloacal exstrophy | 15 | Medicolegal | 3 |
| Abdominal and renal trauma | 13 | Management | 1 |
| Acquired lesions of the lung and pleura | 11 | Ethics | 1 |
| Undescended testes, tumors | 11 | Economics | 1 |

CME: Continuous medical education, N/A: Not available

| TOPIC                        | 2014 | 2015 | 2016 | 2017 | 2018 | TOTAL |
|------------------------------|------|------|------|------|------|-------|
| Hydrospadias                 | 6    | 8    | 14   | 19   | 13   | 60    |
| Bladder Disorders            | 6    | 12   | 2    | 15   | 9    | 44    |
| Biliary Tract Disorders      | 1    | 6    | 12   | 10   | 8    | 37    |
| Anorectal Malformations      | 5    | 7    | 7    | 5    | 5    | 29    |
| Hirschsprung’s Disease       | 4    | 3    | 8    | 3    | 6    | 24    |
corporeal membrane oxygenation (ECMO). Minimally invasive surgery (including robotic) accounted for 57 presentations (8.4%).

**Discussion**

The annual IAPSCON is the main conference for the Indian Association of Pediatric Surgeons and is of interest to the majority, if not all, Pediatric Surgeons and allied healthcare professionals (e.g., Pediatricians and Nurses) who, in their clinical practice, have to treat children with surgical disease in India. Therefore, it would be reasonable to expect that abstracts submitted for consideration for presentation at this conference are a true reflection of the nature and range of current clinical and research activity in Pediatric Surgery in India.

The authors embarked on this exercise to obtain an overview of such activity to establish areas of interest, the nature of the discourse, trends, and areas of poor representation. Such an endeavor is considered important for several reasons:

- Inform policymaking
- Direct resource allocation
- Identify areas of poor interest or representation
- Assess the quality and quantity of scientific activity

The range and volume of clinical material presented at the IAPSCON are large and varied. This evaluation exercise indicates that the Pediatric Surgical fraternity in India has a predilection for Urology sub-specialty, in particular hypospadias surgery, followed by the bladder and other urethral conditions; perhaps reflecting the clinical burden of these conditions. Groin conditions such as inguinal hernia, hydrocele, and undescended testis, though common conditions, perhaps do not merit scientific discussion because their treatment and outcomes are well established, and therefore of low scientific interest. Of the clinical areas that are poorly represented, while it could be argued that chest wall deformities, fetal therapy, ECMO and bariatric surgery are not areas of clinical practice that are well-established in a developing country such as India, gastro-oesophageal reflux and congenital abdominal wall defects are notable by their absence in the discourse.

It is the authors’ impression that scientific studies in the following areas of clinical and hospital-based management practices are poorly represented at the IAPSCON Scientific meetings: patient/parent/public feedback, population-based studies, the WHO theatre safety audits, training issues, manpower and workforce issues, questionnaire surveys, quality of life assessments, economics/costing exercises, consent/medicolegal issues, collaboration with other related specialties, or non-medical specialties. Regional and national outcome studies either in the form of institutional workload (including crude morbidity and mortality data) or certain index conditions, particularly oncology (an area that has received much attention and resource allocation in the West) are lacking.

Methodological quality has become an increasing focus of attention for scientific journals in recent years, and the Oxford Levels of Clinical Evidence template serves as a ready and universally accepted tool for such an assessment. Although our assessment of the IAPSCON oral presentations against this measure does lack rigor because of its subjective application to the titles of the presentations, it does provide an overview of the scientific quality of what is being presented at these conferences. It does draw attention to the need for Pediatric Surgeons embarking on new clinical research projects to pay attention to their methodology and strive to achieve at least a Level II (cohort study) or Level III (case-control study) and move away from Levels IV and V (case series, case report, and expert opinion).

**Limitations of this evaluation**

This evaluation is assessing only oral presentations (short paper and long paper) submitted to the IAPSCON and this may not be representative of the true nature of clinical and research activity in Pediatric Surgery in India. However, the authors believe this to be a reasonable representation as >90% of submissions are usually accepted by the Organizing Committees, and rejections are few (personal communication from Secretary, IAPS). Ashcraft’s List of Contents for subject headings may not necessarily represent the entire range of topics in the field of Pediatric Surgery and may not be reflective of disease patterns and clinical presentations in the Indian subcontinent.

**Conclusions**

This qualitative study of the contents of the oral presentations at IAPSCON 2014-2018 is an attempt to obtain an overview of the nature of the clinical and scientific research activity in the field of Pediatric Surgery in India. It has given a glimpse of the range of the discourse and highlights areas of greater and lesser interest. This review has shown that certain sub-specialties (urology, biliary tract) and conditions (hypospadias) are well represented, and some other areas (inguinal/scrotal conditions) or conditions (gastrooesophageal reflux, congenital abdominal wall defects) do not receive much attention. The nature of scientific interrogation is largely confined to case series and clinical-operative management, with less attention to institutional/regional/national data, large
scale longitudinal studies, multi-disciplinary projects, or obtaining feedback from the people we serve, i.e., patients and parents.

The authors have resisted the temptation to critique the contents of the Scientific Program following this evaluation as it is felt this would be an overreach given the subjective nature of these observations. It is hoped that the Scientific Committee of IAPS and the discerning reader would reflect on the nature of the discourse and draw their own conclusions; and that this review has provided a representative commentary on current scientific activity in Pediatric Surgery in India.

**Post-script-future directions**

We recommend that the IAPS Scientific Committee should encourage and support its fraternity to consider the following:

- there is a more balanced representation of areas of clinical disease in the scientific meetings
- institutions should collect and share data on clinical workload and outcomes for all patients treated to establish national trends; in this regard, there is a great need for workforce and resource allocation to establish a National Registry of selected index cases under the auspices of IAPS
- develop Audit tools for measuring the quality of clinical practice in areas that are universally applicable—consent, the WHO theatre safety checklist, mortality within 30 days of operation, re-admission within 30 days, are some examples
- multi-institutional collaborative efforts be undertaken to design, fund, and conduct OECM Level II (cohort study) studies on selected topics.

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**Conflicts of interest**

There are no conflicts of interest.

**Reference**

1. Available from: https://www.cebm.net/2016/05/oebm-levels-of-evidence/. [Last accessed on 2020 Feb 19].