

Procedural Exposure Analysis of Logbook Data of A Government Surgeon for One Year Period

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Abstract

Maintaining the logbook by surgeons was not properly done in India. In this paper we analyzed the logbook of a surgeon during the first year of surgical practice immediately after the postgraduation. Periodical self logbook analysis will improve the efficacy of surgeon and morbidity to the patients.

Keywords: Logbook; Surgeon; Morbidity.

Introduction

Surgeon's efficacy and outcome of surgery improves with their experience in years of practice through exposure to the procedures. Surgical training and analysis of the outcome of various surgical procedure will improve the standard of care for the patients.

Most of the studies pointing that surgeons experience were influencing the operative results and quality of life postoperatively. Now a days surgical field trainees also exposed to less number of cases in their training period [1,2].

Surgeons may face high complications during their early surgical career. Each year of independent practice can reduce 10% of postoperative complications the patient experience [3]. Here, we analyzed the exposure of government medical college general surgeon to various surgical procedure during his first year of surgical career.

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Materials and Methods

We analyzed the self-made logbook of a government general surgeon in a peripheral medical college, during the first year of surgical practice immediately after postgraduation. Various surgical procedures done/ assisted and endoscopic procedures performed during July 2017 to June 2018 was entered in excel sheet and analyzed. Procedures claimed by the surgeon, which was not entered in the logbook was not included in the analysis, but noted separately.

Results

Total surgical procedures entered in the logbook was 96, which includes 90 elective surgeries and 6 emergency surgeries. Among them 86 were operated at government hospital and 10 at private hospitals. Non surgical procedures like Oesophago-Gastro-Duodenoscopy (OGD) and colonoscopy were 44 & 5 respectively.

Age group wise, more than 13 years were 84 and less than 13 years were 12. Surgeries done by the surgeon were 59 and assisted to other surgeons were 37. On average the surgeon involved in weekly two surgical procedure.

Common surgical procedure exposed was open hernia surgery, which was 27 (28.1%) in number. Inguinal hernia repair leads the list followed by heriotomy, ventral / incisional / umbilical hernia and femoral hernia repair.

Next common surgical procedures exposed were gastrointestinal procedures 15 (15.6%), Laproscopic procedures 14 (14.6%), Genitourinary procedures 7

(7.3%) and other 33 procedures which include excision biopsy 13 (13.5%), thyroidectomy 6 (6.3%), split thickness skin grafting 5 (5.2%), etc. [Table 1 & Figure 1]

One death was noted in an emergency laparotomy for mesenteric ischemia case, the possible cause of death was noted as "Due to old age, sequelae of tuberculosis and cachexia".

In the logbook, entry was not maintained for procedures like wound debridement, amputations, intercostal tube drainage and other surgical procedures done in wards. The surgeon also claimed as assisted for 3 hysterectomies in emergency, but not entered in logbook.

The surgeon also published 4 research papers during this period, which includes an editorial also in the list. The surgeon was selected for super speciality postgraduate course in paediatric surgery in August 2018.

Discussion

Common surgical procedures exposed by the surgeon was hernia repair, particularly inguinal hernia surgery and gastrointestinal procedure appendectomy. Which is similar with the other studies done in India[4,5].

In the era of laparoscopy, exposure to laparoscopic surgeries which is considered important for any new general surgeons [6]. The logbook of surgeon analyzed also exposed to good number of laparoscopic procedures, next to hernia and gastrointestinal surgeries.

Even though the surgical logbook is an important tool for surgeons, which is not properly maintained by the surgeons in India. The analyzed logbook of this surgeon also not properly maintained and had lots of missed records due to writing data manually in the self-made logbook. Which can be minimized using

Table 1: Different surgical procedure or skilled procedures the surgeon exposed

Open Hernia Repair (27)	Laposcopic Procedures (14)
<ul style="list-style-type: none"> - Inguinal Hernioplasty - 15 - Open Mesh Repair for ventral / incisional / umbilical hernia- 5 - Herniotomy - 6 - Femoral Hernia Right/Inguinal Hernia Left -1 	<ul style="list-style-type: none"> - Lap Appendectomy - 7 - Lap Mesh Repair for incisional hernia - 1 - Lap Cholecystectomy - 3 - Transabdominal Preperitoneal(TAPP) Mesh Repair - 3
Gastrointestinal (15) <ul style="list-style-type: none"> - Laprotomy - 4 (Giant Duodenal Ulcer Perforation-1, Necrotizing Pancreatitis -1, Blunt injury with Sealed Perforation of bowel - 1, Grahams Patch closure - 1) - Covering Ileal Loop take down -1 - Whipples Procedure - 2 - Frey Procedure - 2 - Ileal Resection and End to End anastomosis with covering ileal loop- 1 - Radical Subtotal/total Gastrectomy/Gastro-Jejunostomy/Jejuno-jejunostomy/Oesophago-Jejunostomy - 2 - Open Appendectomy - 3 	Genitourinary (7) <ul style="list-style-type: none"> - Nephrectomy - 1 - High Inguinal Orchiectomy - 1 - Circumcision - 4 - Hydrocele Surgery - 1
Others (33) <ul style="list-style-type: none"> - Excision Biopsy - 13 - Thyroidectomy -6 (Total - 4, Hemi - 2) - Split thickness Skin Graft(SSG) - 5 - Modified Radical Mastectomy - 2 - Secondary Suturing-1 - Wide Local Excision/Inguinal Block Dissection - 1 - Trendelenberg procedure - 1 - Hemorrhoidectomy - 1 - Lateral Spincterotomy - 2 - Ligation of Linter Fistulous Tract(LIFT) - 1 	Oesophago-Gastro-Duodenoscopy(OGD scopy) - 44 Colonoscopy - 5 Research Papers Published - 4

Surgeries Performed/ Assisted

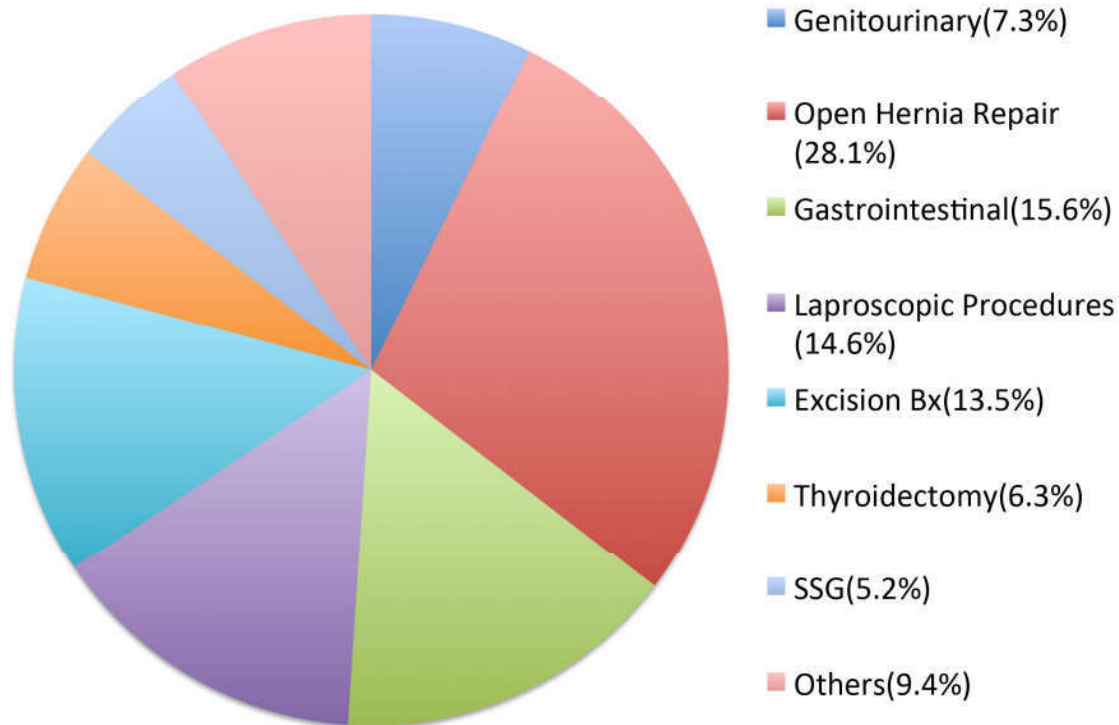


Fig. 1: Pie chart of different surgical procedures the surgeon performed/assisted

electronic logbooks by using mobile applications, which is simple and easy to make entries [7-9].

As the surgeon worked in a peripheral medical college hospital, where there is no pediatric surgeon available. Even though the surgeon not involved in operating major cases in pediatric surgery, he exposed to a significant number of pediatric surgery cases before his residency in pediatric surgery. Which is important in refining the skill of the general surgeon, and the basic general surgery principals continue to be the basics even in pediatric surgery [10].

The surgeon not involved in private practice, otherwise the number of skilled procedures might be high. Without separate private practice, exposed cases in private also significant.

In medical college hospital the surgeon might be exposed to number of academic programs and teaching schedule. Always there will be senior surgeons and professors to guide the surgeon. Which will improve the knowledge to the surgeon and care to the patients.

The drawback of the analyzes is no control to compare with other private/city medical college surgeons logbook data to compare. And the single surgeon data will not represent all the government surgeons.

Conclusion

Maintaining logbook is a good habit, which will be used for self-analysis periodically. Mobile application logbook may be a simple and effective tool to use conveniently. Government surgeon in a teaching hospital will expose to good number of different surgical cases and skilled procedures, which will improve the efficacy of the surgeon and which in turn reduce the morbidity to the patients.

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