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ANALYSIS OF THE CAUSES OF READMISSION IN PATIENTS AFTER LAPAROSCOPIC APPENDECTOMY

АНАЛІЗ ПРИЧИН ПОВТОРНОЇ ГОСПІТАЛІЗАЦІЇ ХВОРИХ ПІСЛЯ ЛАПАРОСКОПІЧНОЇ АПЕНДЕКТОМІЇ

Резюме. Аналіз клінічних даних хворих, які поступили з ускладненнями після лапароскопічної апендектомії впродовж 30 днів за період 2010-2012 р.р.

Ключові слова: повторна госпіталізація, лапароскопічна апендектомія, ускладнення.

The operative technique for Acute Appendicitis (AA) consists of an appendectomy; however, the choice of either an open or laparoscopic operation continues to be challenged in the medical literature [1]. Historically, the RLQ incision of open appendectomy has persisted essentially unchanged since it was pioneered by McBurney in the 19th century. The use of laparoscopy in the surgical management of AA was first described in 1983, with a continued increasing trend in its use [2].

As with other acute diseases of the abdominal cavity after laparoscopic laparotomy (appendectomy), unfortunately, a number of well-known complications such as bleeding, leakage, purulency, abscess formation, adhesions formation, leading to the development of adhesive disease and intestinal obstruction. In addition, the forms themselves inflammation can manifest initially as a simple (catarrhal) or purulent (phlegmonous, gangrenous), in turn, with a possible inflammation of the peritoneum (limited local) or general (diffuse) peritonitis. What makes surgeons constantly analyse complications and readmissions for one reason or another, with the improvement of the methods of surgical treatment [3, 4].

Introduction: laparoscopic appendectomy (LA) is considered to be a standard treatment for acute appendicitis due to low surgical site infection rate and early ambulation [5]. Current studies are focusing on early discharge and "outpatient procedure" though readmission rates are high. The purpose of this study was to analyse the outcomes of LA and examine the rate of readmission 30 days after surgery [6].

Methods. *We conducted a retrospective cohort analysis based of all patients who had LA in our hospital. Patient's files were surveyed for demographic data and comorbidities as well as WBC, temperature and pulse rate during the index admission. We documented intraoperative findings, the usage of drain, antibiotic treatment, length of surgery and length of stay. We recorded similar data of all patients who were readmitted 30 days after surgery including radiological findings and initial treatment and usage of invasive procedure, if needed.*

Results. During the years 2010 to 2012, 412 patients had appendectomy due to acute appendicitis. Of them, 390 patient had LA with mean age of 26.7 years (range 6-91, median 21). Preoperative data is summarised in table 1. Uncomplicated appendicitis was found in 334/374 (89.3%) and complicated appendicitis was found in 37/374 (9.9%) [7]. White appendix was found in 3/374 (0.8%). Drain was placed in 17.8% of patients and the conversion rate was 2.7%.

Table

First admission data

Criteria		No-readmission 369(94.6%)	Readmission 21 (5.4%)	All cases (390)
Gender	Males	247 (66.9%)	11 (52.4%)	258(66.2%)
	Females	122 (33.1%)	10 (47.6%)	132 (33.8%)
Origin	Jewish	174 (47.2%)	11 (52.4%)	185 (47.4%)
	Arab	182 (49.3%)	9 (42.9%)	191 (49.0%)
	Other	13 (3.5%)	1 (4.8%)	14 (3.6%)
Temperature	Mean	37.0	36.9	36.8
	Median	36.8	36.7	36.8
	Range	36.8-39.3	36.7-39.0	36.0-39.3
WBC*	Mean	13817.8	14832.9	13872.7
	Median	13620.0	14650.0	13700.0
	Range	1715.0-25700	6120.0-28000	1715.0-28000.0
Pulse Rate	Mean	86.2	83.6	86.0
	Median	84.0	85.0	84.0
	Range	50.0-130.0	60.0-110.0	50.0-130.0
Intra- operative findings	Uncomplicated	332 (90.7%)	12 (57.1%)	344 (88.9%)
	Complicated	32 (8.7%)	8 (38.1%)	40 (10.3%)
	White	2 (0.5%)	1 (4.8%)	3 (0.8%)
Hospital stay	Mean	2.6	3.1	2.7
	Median	2.0	2.0	2.0
	Range	1.0-33.0	1.0-8.0	1.0-33.0
Length of surgery	Mean	41.9	44.5	42.0
	Median	38.0	41.0	38.5
	Range	14.2-133.1	24.1-82.9	14.2-133.1

*WBC – white blood count

Twenty three patients (5.58%) were readmitted during the early postoperative period. Of them, 21/23 patients were admitted due to surgical related complications (one had hip fracture and another had chest pain). Ten patients had abscess or defined collection [8]. All patients were treated with antibiotics and only two needed further radiologic invasive drainage (table).

Conclusion. LA is a safe procedure. Readmission rates are low and in most cases patients can be treated conservatively.

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АНАЛИЗ ПРИЧИН ПОВТОРНОЙ ГОСПИТАЛИЗАЦИИ БОЛЬНЫХ ПОСЛЕ ЛАПАРОСКОПИЧЕСКОЙ АПЕНДЕКТОМИИ

Резюме. Анализ клинических данных больных, поступивших с симптомами осложнений в течение 30 дней, после лапароскопической аппендектомии, выполненной за период 2010 -2012 г.г.

Ключевые слова: повторная госпитализация, лапароскопическая аппендектомия, осложнения.

ANALYSIS OF THE CAUSES OF READMISSION IN PATIENTS AFTER LAPAROSCOPIC APPENDECTOMY

Abstract. The analysis of clinical data of the patients admitted with symptoms of complications within 30 days after laparoscopic appendectomy, performed during the period of 2010 -2012 is presented.

Key words: readmission, laparoscopic appendectomy, complications.

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