The Safety of Discharging Post Appendectomy Patients Directly from the Recovery Room to Home

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Is it Safe?

http://www.youtube.com/watch?v=swz1_2b17A

• Just go to youtube and type in “is it safe? marathon man” and you get the 22 second clip which will get the audiences attention. There are longer versions, just want the 22 sec version

Study Purpose

• Our study aims to show that the 30 day readmission rate of patients after an appendectomy discharged home from the PACU is not inferior in the rate of 30 day readmission currently reported in the literature for traditional hospital discharge

Discharge Home After Surgery

• Over the last 30 years improvements in surgery, anesthesia and a mental paradigm shift in where it is considered safe to be soon after surgery has led to the steady adoption of discharging patients home from the PACU (Recovery Room) for many diseases/procedures
• The practice of discharging a patient directly to home from the recovery room after an appendectomy has not been described in the literature

In this presentation:

• Appendicitis Pathophysiology
• History of Appendectomy
• Literature Review Readmissions
• Our Study Method
• Our Results
• Questions/Discussion
Appendicitis

- Definition: Inflammation in the appendix
- Cause: blockage of the appendix from fecal impaction or lymphoid hyperplasia.
- Blockage → Inflammation → ischemia → rupture → peritonitis
- 1927 McCarthy - Appendicitis is a MEDICAL EMERGENCY. A rapid response is CRITICAL

History

- First Appendectomy: 1735 by Claudius Amyan performed during a hernia operation
- Boston surgeon Reginald Fitz published a paper in 1886 and was the first to call this pathology “appendicitis”.
- Philadelphian Dr. Thomas Morton performed the first appendectomy for appendicitis successfully in 1887
- First performed laparoscopically by German gynecologist Kurt Semm in 1981
- Today the Laparoscopic procedure has become mainstream

Common Readmission Diagnosis

- Ileus
- Intra-abdominal abscess
- Adhesions
- Wound-site infection

Literature Review 30 day Readmission Rate

- Taiwan – Tsai-Chung Li – 2011
- Harbor UCLA, Adults – Steven Lee – 2012
- Southern CA, 12 Hosp Peds – Amy Kaji - 2011

Outpatient laparoscopic appendectomy

- Published in Surgical Endoscopy 1995
- Kaiser Sunset
- 2/1992 to 7/1993 (18 months)
- Retrospective
- Focus – outcome of short length of stay
- 110 appendectomy cases, 75 lap and 35 open
- 75 Lap appy with 9 (13%) conversion to open
- 35/75 (46%) lap appy discharged within 12 hours
- None were discharged from recovery room
- 27/35 (77%) inflamed, 8 (23%) normal
- 0/35 (0%) Readmissions

The Road to Ambulatory Laparoscopic Management of Perforated Appendicitis

- Presented to Royal College of Physicians and Surgeons annual meeting 1999
- 151 lap appy from 1995-1998
- 38/151 (25%) were perforated
- 18/38 (47%) were discharged within 24h
- 0/18 (0%) were readmitted within 30 days
Laparoscopic Appendectomy in Children: Can Be Done as a Fast-Track or Same-Day Surgery

Harsh Grewal, MD; Jeffrey Svaty, MD; W. David Vazquez, MD

- From Temple University, published 2004 by Journal of the Society of Laparoendoscopic Surgeons
- 79 Lap appy performed from 7/1997-7/2000 in patients between 2-17 years
  - 51/79 (64.5%) had acute appendicitis
  - 22/79 (27.8%) had perforated appendicitis
  - 32/79 (56%) went home in ≤24h, none perforated
  - 0/32 (0%) were readmitted within 14 days

Laparoscopic Appendectomy for acute appendicitis is more favorable for patients with complications, the elderly, and those with complicated appendicitis: a nationwide population-based study

Chiu-Chieh Yeh - Shih-Chi Wu - Chun-Chang Lin -
Le-Huey Su - Chih-Hung Huang - Tzong-Chuang Li

- Published in Surgical Endoscopy 2011
- Taiwan, national data base
- 2001 to 2008 (8 years)
- Retrospective
- Focus - costs & length of stay: lap vs open
- 166,690 appendectomies - avg 20,800 per year
- 22,252 (13.3%) lap appy, both non-perf & perforated (18%)
- Laparoscopic rate increased from 1% to 37% over the 8 years
- Lap appy, mean hosp stay, 4 days
- 30 day readmission rate of lap appy, perf and non-perf , 1.3%

Laparoscopic versus Open Appendectomy: Outcomes Analysis

Aziz Yakoubian, M.D., Amy H. Kaj, M.D., Ph.D. Steven L. Lee, M.D.
From Harbor-UCLA Medical Center, Torrance, California

- Published 2012 in The American Surgeon
- Harbor UCLA
- Study from 1998 to 2008 (11 years)
- Retrospective
- Focus - 30 day morbidity, length hosp – lap vs open
- 16,512 Adult patients - 18 yrs and older, Open & Lap
- 8,133 lap appy, non-perf
- Length of hospitalization 1.4 +/- 1.2 days
- 30 day readmission rate, 3%

Study Methods

- Retrospective review
- The operating room electronic data base from one surgery department operating at two affiliated hospitals was used to identify all appendectomies during the years 2011 & 2012
- Appendectomies that were interval or part of another procedure were excluded

Methods (Cont.)

- The electronic medical record and PACU log book were used to identify all patients discharged directly from the PACU to home
- Data obtained on PACU discharge patients included 30 day readmission, surgeon, lap vs open, admission time, time out of OR, time of discharge, pathologic condition appendix
- All 30 day readmissions were analyzed in depth
Results
- 1,014 appendectomies were identified
- 904 (89%) laparoscopic, 110 (11%) open
- 534 (53%) discharged from the PACU
- 531/534 (99.4%) PACU DC had a lap appy
- 11/534 (2%) were perf or gangrenous on path
- Avg time in PACU till DC home = 2 h 30 m
- 8 (1.5%) 30 day readmissions
- 6 (1.1%) related to appendicitis/appendectomy

Discharge Times
- Patients were discharged after tolerating clear liquids and their pain adequately controlled

30 Day Readmissions = 8
- Breast CA related biopsy or treatment 2
- Ileus 2
- RLQ Intra-abdominal Abscess 2
- LLQ Port Site Abscess 1
- Bleeding 0
- Return to OR 0
- Un-recognized lap injury 0
- Admit Critical Care 0
- Death 0

Comparison Readmission Rates
- Current study 1.1%
- Kaiser Sunset lap, non-perf 0.0%
- Taiwan lap, perf & non-perf 1.3%
- Harbor UCLA Adult, lap, non-perf 3.0%
- Hosp S. Calif, Peds 1.9%

Limitations
- Retrospective
- Not Randomized
- Comparison to other studies from other types of organization & different historical times may not be valid

Conclusions
- Patients with acute appendicitis who are discharged from the PACU to home did not have an increased incidence of 30 day readmission when compared to hospital discharge patients reported in the literature.
Case 1  57 y/o male [do not use this slide]

- WBC 5,300 lap appy, inflamed appendicitis
- POD #5 C/O 3 days of poor oral intake, nausea, abdominal cramping, distension, loose stool
- PE  T 97.8, abd soft, no guarding or rebound
- WBC 8,200
- CT scan ileus pattern, no abscess
- Dx ileus
- Rx NPO, hydration, NG tube, c diff neg
- DC home after 7 days

References


