THE ROLE OF SURGERY IN ACUTE PANCREATITIS

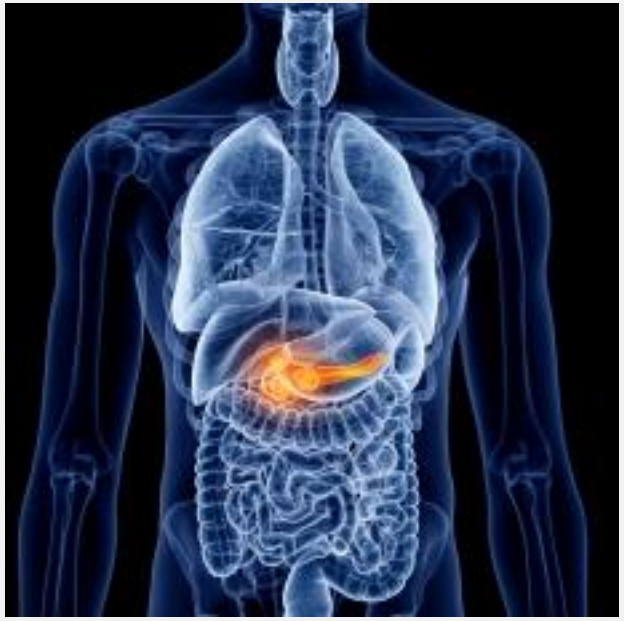
Mr Andrew Audeau, HPB Surgeon SDHB

Southern District Health Board

dunedin

DISCUSSION POINTS

- Case scenario
- Revised Atlanta Classification 2012
- Severity assessment of pancreatitis
- Step up approach (percutaneous / endoscopic) for severe necrotising pancreatitis
- Role of cholecystectomy for mild – moderate pancreatitis
- Role of cholecystectomy for recurrent idiopathic pancreatitis
- Role of ERCP in acute pancreatitis

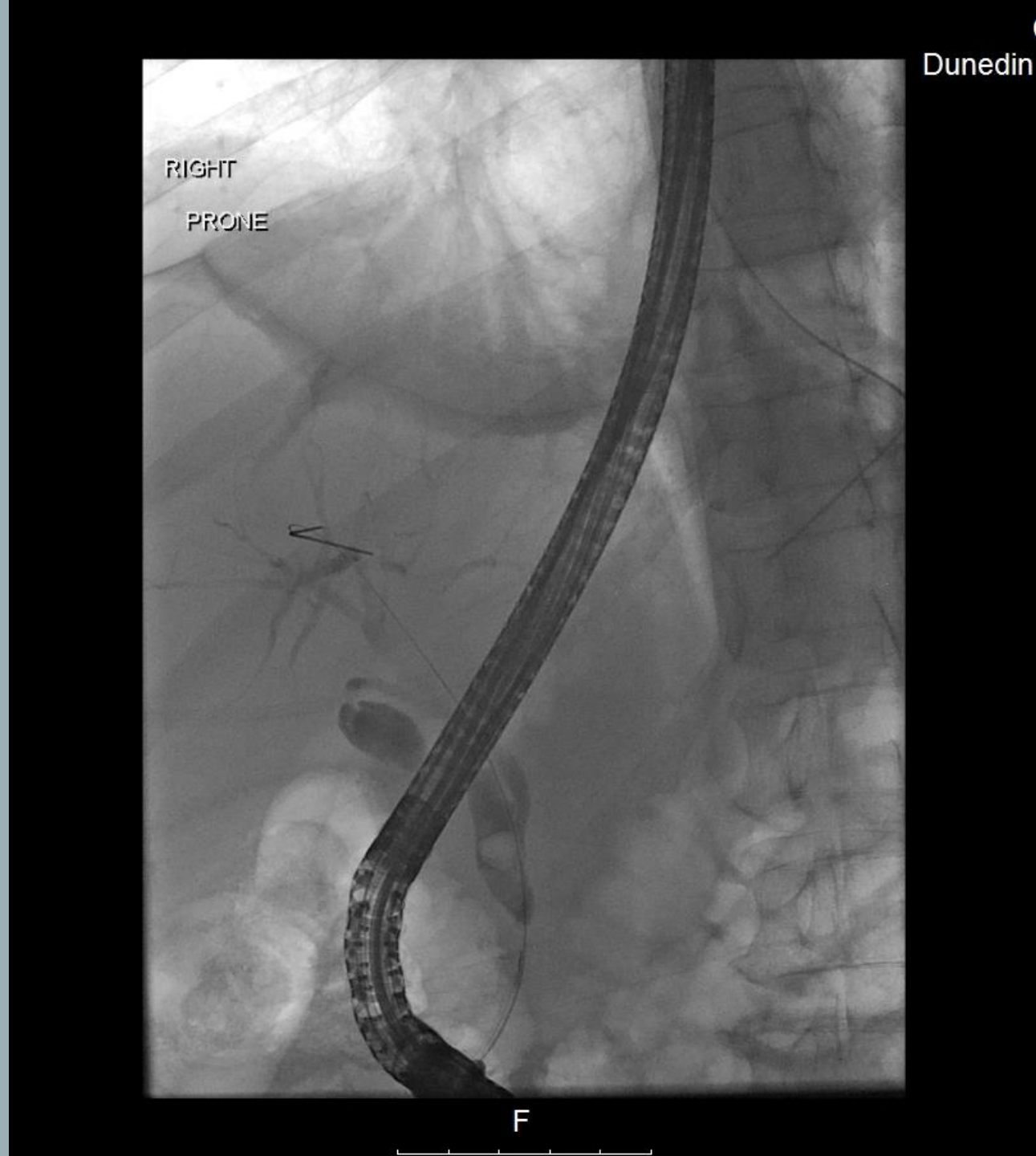


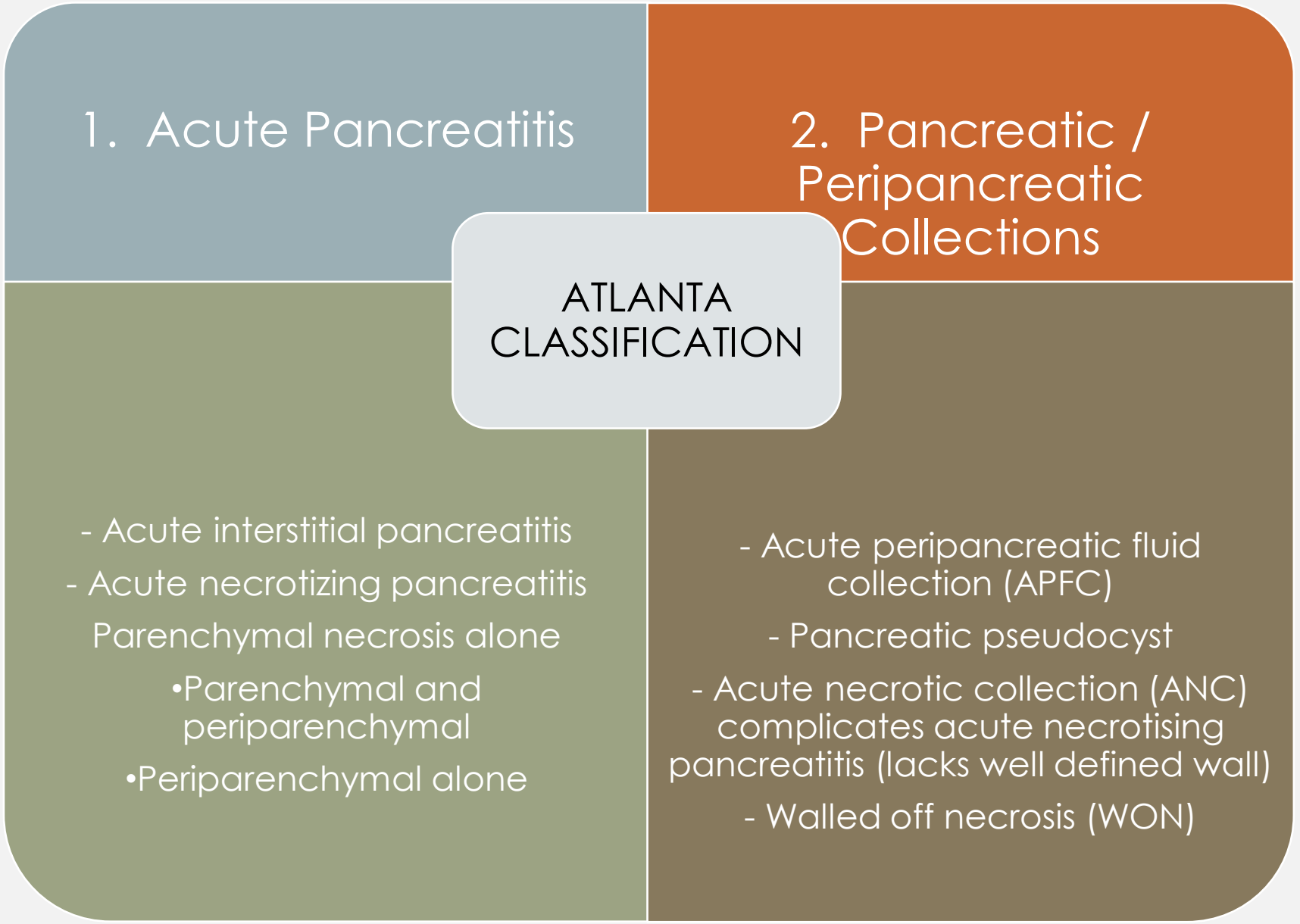
https://medlineplus.gov/pancreatitis.html

MR F

Transferred from Southland to Dunedin ICU with severe pancreatitis / cholangitis

- Intubated
- Emergency ERCP / stent
- Good recovery
- Not suitable for interval ERCP (very large periampullary diverticulum)
- 5 weeks post admission cholecystectomy and bile duct exploration




1. Acute Pancreatitis
2. Pancreatic / Peripancreatic Collections
ATLANTA CLASSIFICATION
- Acute interstitial pancreatitis
- Acute necrotizing pancreatitis
Parenchymal necrosis alone
•Parenchymal and periparenchymal
•Periparenchymal alone
- Acute peripancreatic fluid collection (APFC)
- Pancreatic pseudocyst
- Acute necrotic collection (ANC) complicates acute necrotising pancreatitis (lacks well defined wall)
- Walled off necrosis (WON)

NATURAL HISTORY

- APFC: 70% resolve within 2 weeks, 5-10% become pseudocysts
- Pseudocysts usually resolve
- ANC evolves into WON over 4 weeks
- WON: about 50 % become infected

INTERVENTION STRATEGY

- A sterile acute necrotic collection rarely requires intervention
- Infected necrotic collection escalates to step up percutaneous / endoscopic drainage
- Asymptomatic WON no intervention
- Symptomatic WON intervention late in course
- Infected WON intervention is mandatory

SEVERITY

Mild	• Absence of organ failure and systemic complication
Moderate	• Transient organ failure < 48 hours and / or systemic complications without persistent organ failure
Severe	• Persistent organ failure of one or more organ

- 25 - 30% of severe pancreatitis patients develop infected necrosis
- Mortality with necrotising pancreatitis 15%
- Mortality in infected necrosis 30 -39%

PREDICTING A DETERIORATION

MEDICAL SCIENCE MONITOR

CLINICAL RESEARCH

e-ISSN 1643-3750
© Med Sci Monit, 2017; 23: 1026-1032
DOI: 10.12659/MSM.900383

Received: 2016.07.02
Accepted: 2016.07.21
Published: 2017.02.26

Risk Factors for Worsening of Acute Pancreatitis in Patients Admitted with Mild Acute Pancreatitis

Authors' Contribution:
Study Design A
Data Collection B
Statistical Analysis C
Data Interpretation D
Manuscript Preparation E
Literature Search F
Funds Collection G

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2 Department of Hepatobiliary Surgery, The Second Affiliated Hospital of Wenzhou Medical University, Wenzhou, Zhejiang, P.R. China

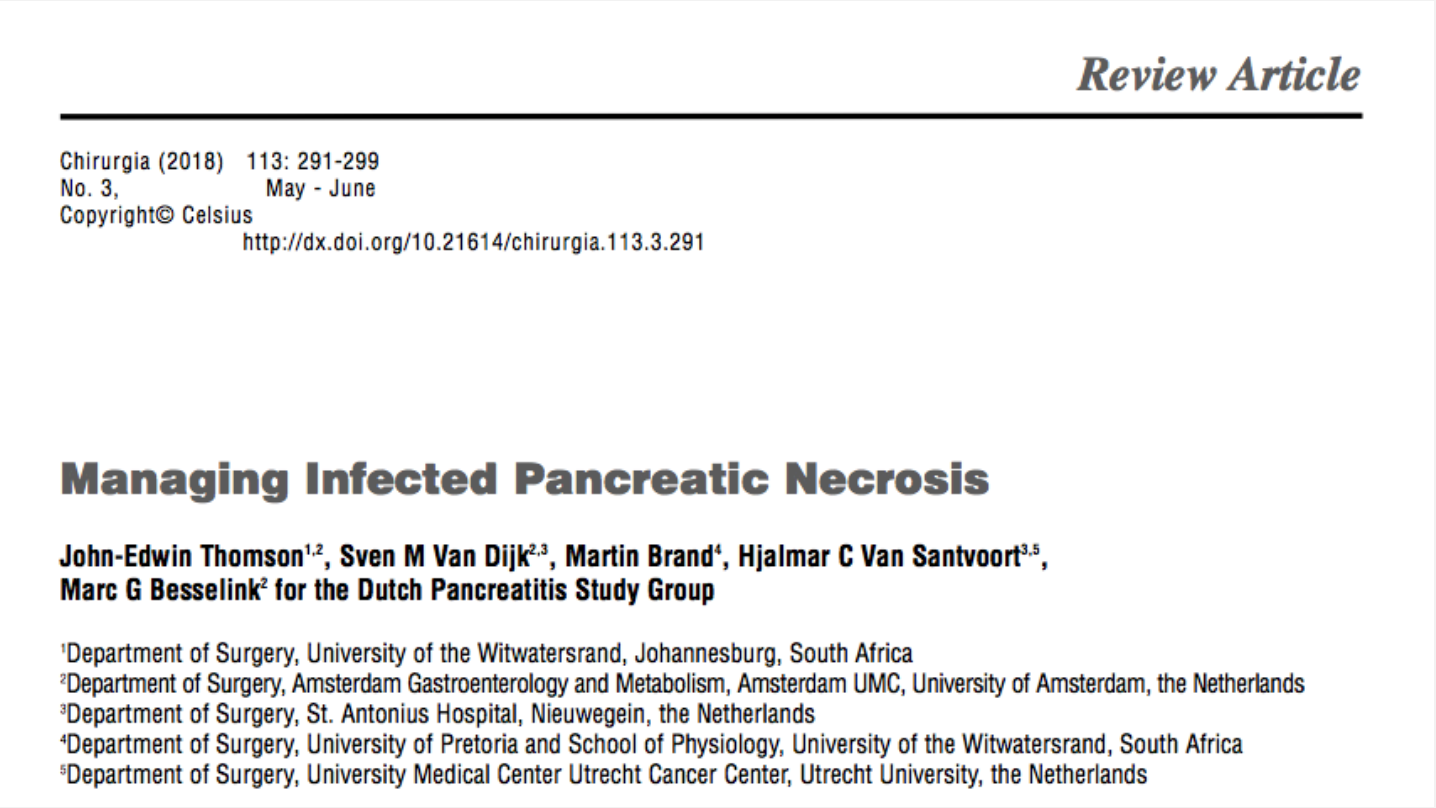
- March 2013 to May 2016
- Prospective analysis
- 602 patients with mild pancreatitis
- 74/602 (12.3%) progressed to moderate or severe

RISK FACTORS FOR PROGRESSION

- BMI > 25
- APACHE II score > 5
- Blood glucose > 11

MANAGING INFECTED PANCREATIC NECROSIS

- MDM approach in Tertiary Level Centre
- No indication for prophylactic antibiotics or Probiotics
- NG, enteral nutrition indicated if feeding insufficient
- Only intervene with infected necrosis
- Delay intervention until walled off necrosis
- Step approach
- Endoscopic strategies preferable when possible



Review Article

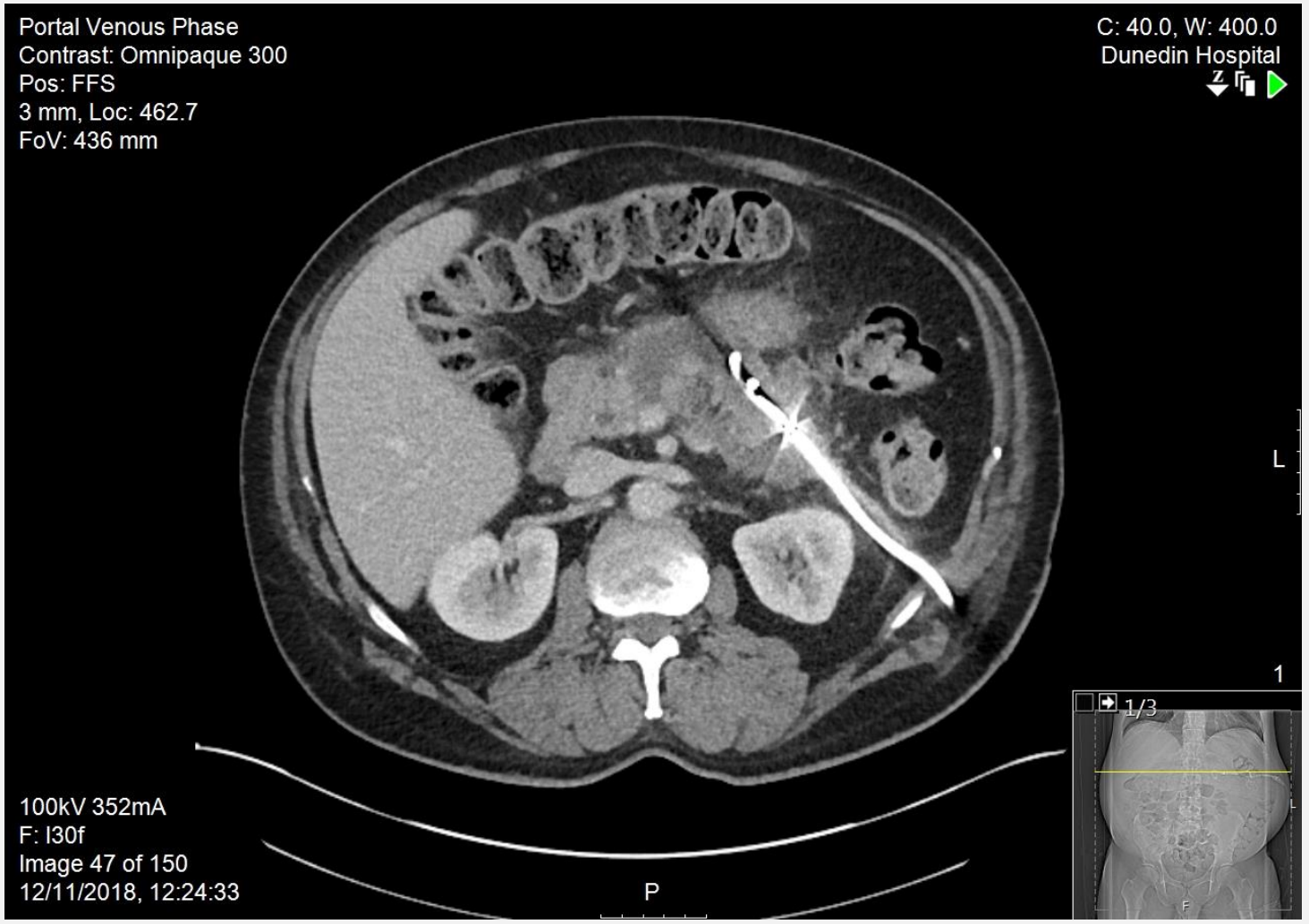
Chirurgia (2018) 113: 291-299
No. 3, May - June

http://dx.doi.org/10.21614/chirurgia.113.3.291

Managing Infected Pancreatic Necrosis

John-Edwin Thomson[1,2], Sven M Van Dijk[2,3], Martin Brand[4], Hjalmar C Van Santvoort[3,5], Marc G Besselink[2] for the Dutch Pancreatitis Study Group

[1]Department of Surgery, University of the Witwatersrand, Johannesburg, South Africa
[2]Department of Surgery, Amsterdam Gastroenterology and Metabolism, Amsterdam UMC, University of Amsterdam, the Netherlands
[3]Department of Surgery, St. Antonius Hospital, Nieuwegein, the Netherlands
[4]Department of Surgery, University of Pretoria and School of Physiology, University of the Witwatersrand, South Africa
[5]Department of Surgery, University Medical Center Utrecht Cancer Center, Utrecht University, the Netherlands


Portal Venous Phase
Contrast: Omnipaque 300
Pos: FFS
3 mm, Loc: 462.7
FoV: 436 mm
C: 40.0, W: 400.0
Dunedin Hospital
L
1
1/3
100kV 352mA
F: I30f
Image 47 of 150
12/11/2018, 12:24:33
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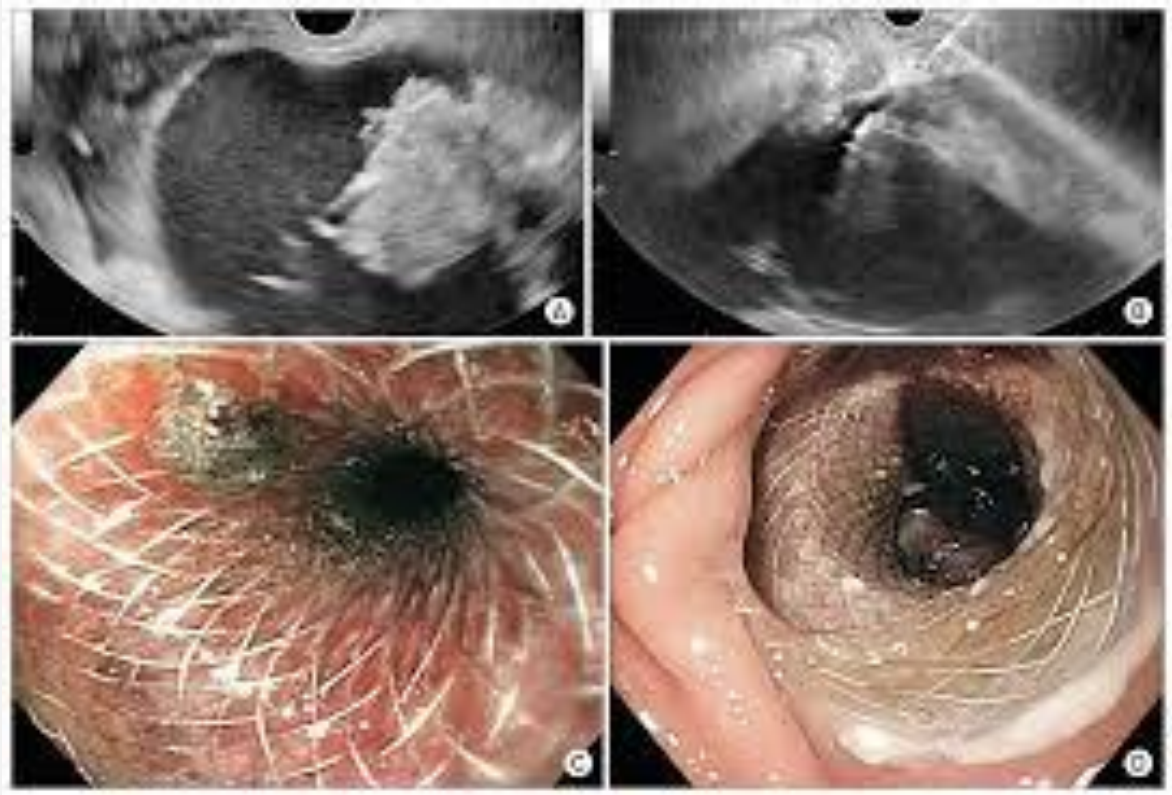
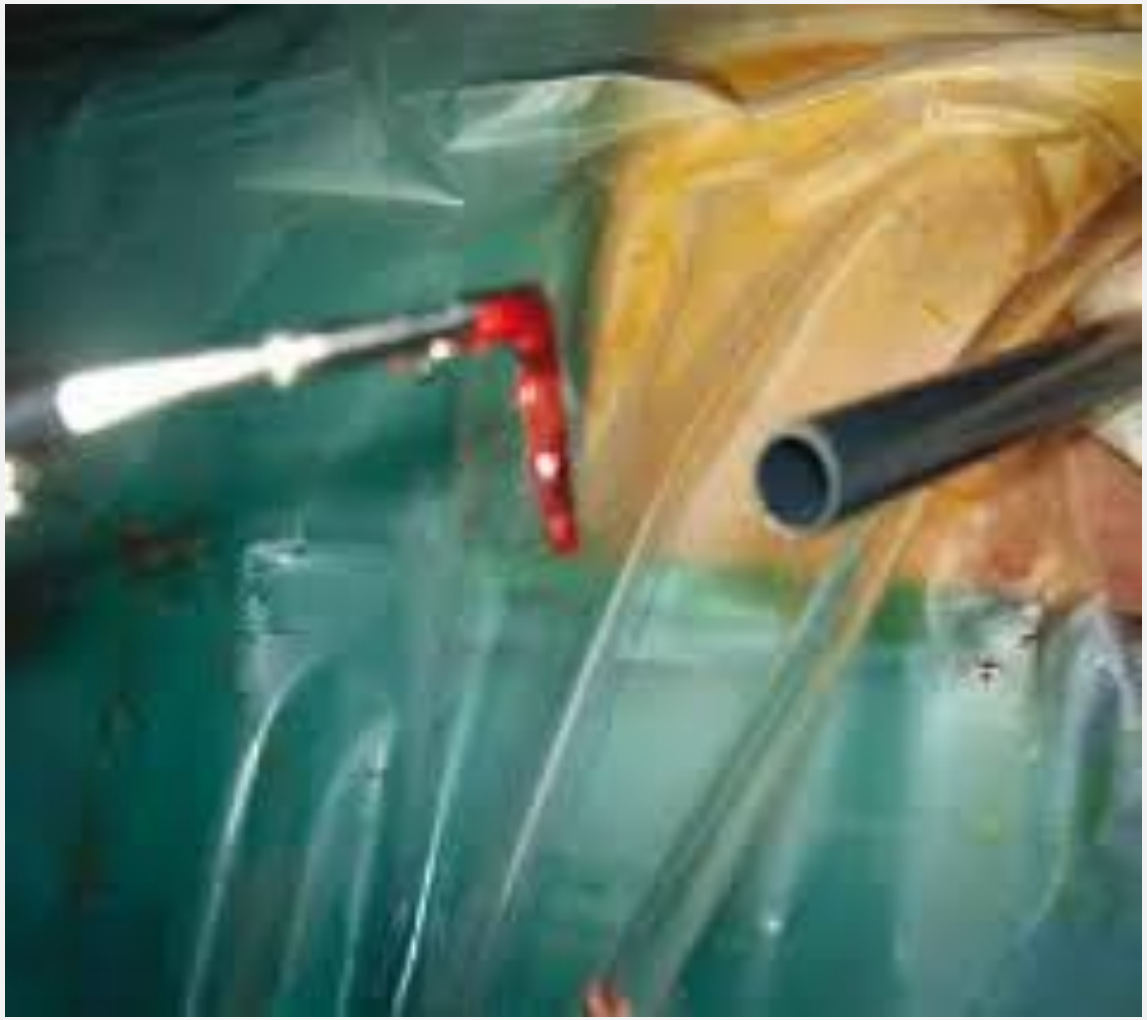
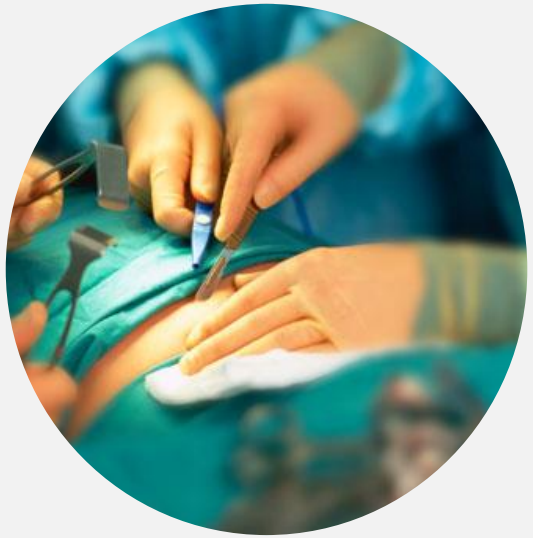


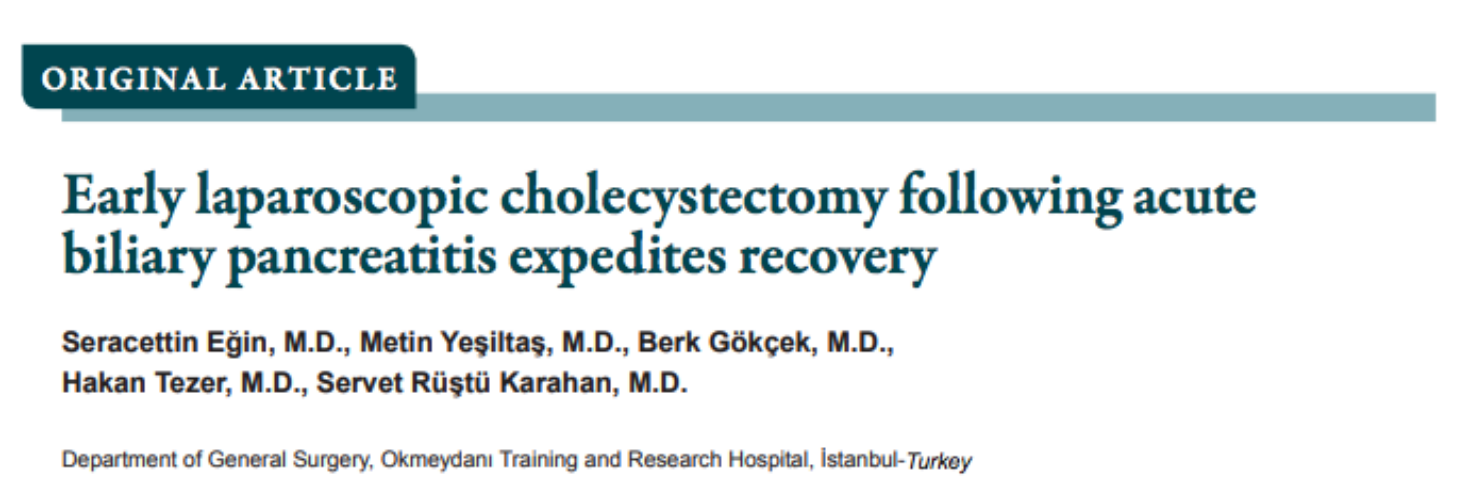


INDICATIONS FOR SURGERY



- NOMI necessitating bowel resection
- Ischaemic colon secondary to infiltration into mesocolon
- Complex fistulation

LAPAROSCOPIC CHOLECYSTECTOMY FOR MILD/MODERATE AP



ORIGINAL ARTICLE

Early laparoscopic cholecystectomy following acute biliary pancreatitis expedites recovery

Seracettin Eğin, M.D., Metin Yeşiltaş, M.D., Berk Gökçek, M.D., Hakan Tezer, M.D., Servet Rüştü Karahan, M.D.

Department of General Surgery, Okmeydanı Training and Research Hospital, İstanbul-*Turkey*

- Retrospective analysis: 131 patients Jan 2009 – Dec 2012
- Early group within 2 weeks – 47
- Late group after 2 weeks – 84
- Length of stay 7.7 vs 10.7 ($p = 0.06$)
- 15/84 in late group had further episodes of pancreatitis

Asian Journal of Surgery (2018) 41, 47–54

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.e-asianjournalsurgery.com

ORIGINAL ARTICLE

Outcomes of early versus delayed cholecystectomy in patients with mild to moderate acute biliary pancreatitis: A randomized prospective study

Shir Li Jee [a,*], Razman Jarmin [b], Kin Foong Lim [a], Krishnan Raman [a]

- 72 patients
- 38 early, 34 delayed
- No difference in intraoperative complications (7.7% vs 11.7% p = 0.07)
- No difference in open conversion (10.5% vs 11.7% p = 1.0)
- 44% of late group had recurrent biliary episodes

Murphy et al. World Journal of Emergency Surgery (2017) 12:20
DOI 10.1186/s13017-017-0128-3

World Journal of Emergency Surgery

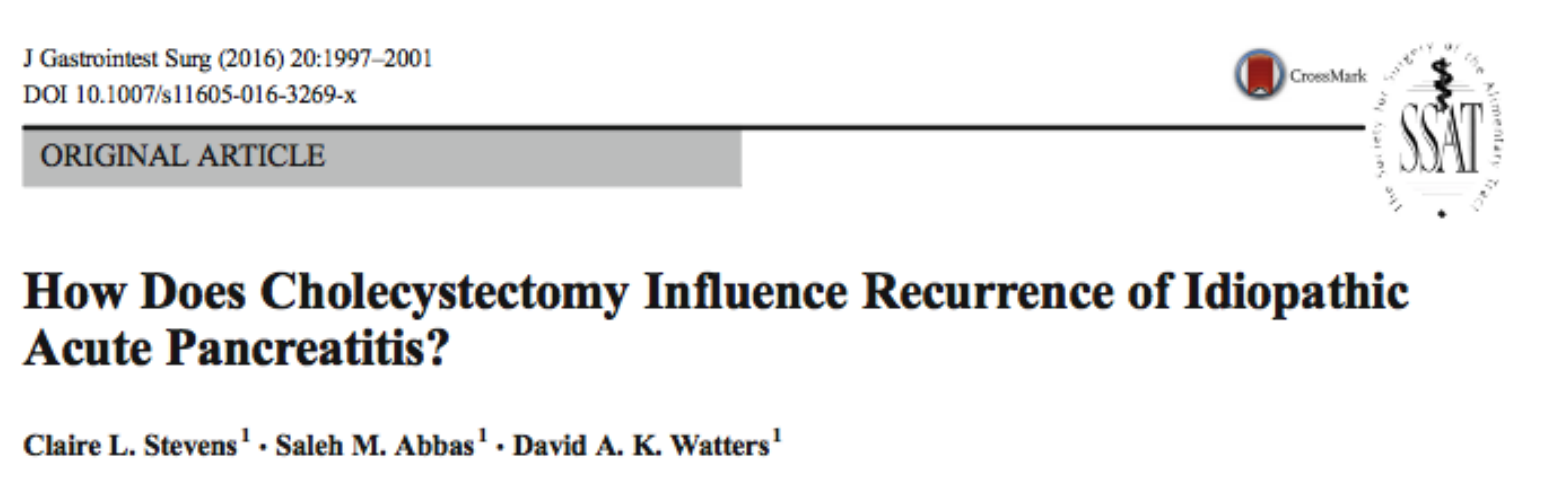
RESEARCH ARTICLE Open Access

Acute care surgery: a means for providing cost-effective, quality care for gallstone pancreatitis

Patrick B. Murphy[1*], Dave Paskar[2], Richard Hilsden[1], Jennifer Koichopolos[1], Tina S. Mele[1,3]
and on behalf of Western Ontario Research Collaborative on Acute Care Surgery

- All patients admitted with non-severe GSP to two tertiary care teaching hospitals Jan 2008 to May 2015
- 435 patients
- Inpatient cholecystectomy rate increased from 16 to 76% with implementation of Acute Surgery service
- Significant reduction in readmissions and ED visits ($p < 0.001$)
- No difference in length of stay or open conversion
- Reduction in cost 12.6% ($1162)

CHOLECYSTECTOMY FOR IDIOPATHIC PANCREATITIS



J Gastrointest Surg (2016) 20:1997–2001
DOI 10.1007/s11605-016-3269-x

ORIGINAL ARTICLE

How Does Cholecystectomy Influence Recurrence of Idiopathic Acute Pancreatitis?

Claire L. Stevens[1] · Saleh M. Abbas[1] · David A. K. Watters[1]

- Retrospective analysis, 2236 patients who presented to a regional Australian hospital
- 195 patients with idiopathic pancreatitis
- 66/195 had cholecystectomy
- Recurrent pancreatitis 19.7 % vs 42.8 % (p = 0.001)

Annals of Surgery. 262(5):736–741, NOV 2015
DOI: 10.1097/SLA.0000000000001469, PMID: 26583660
Issn Print: 0003-4932
Publication Date: 2015/11/01

Print

Can Laparoscopic Cholecystectomy Prevent Recurrent Idiopathic Acute Pancreatitis?: A Prospective Randomized Multicenter Trial

Sari Räty; Jukka Pulkkinen; Isto Nordback; Juhani Sand; Mikael Victorzon; Juha Grönroos; Heli Helminen; Pekka Kuusanmäki; Pia Nordström; Hannu Paajanen

- Randomised prospective study
- 85 patients
- 39 LCC 46 control
- 8 Finnish hospitals
- Median follow up 36 months (5-58)
- Recurrence 14/46 vs 3/39 (p = 0.016)
- 25/39 of inspected gallbladders had biliary stones/sludge

ROLE OF ERCP

RESEARCH ARTICLE

Urgent endoscopic retrograde cholangiopancreatography is not superior to early ERCP in acute biliary pancreatitis with biliary obstruction without cholangitis

Hee Seung Lee, Moon Jae Chung*, Jeong Youp Park, Seungmin Bang, Seung Woo Park, Si Young Song, Jae Bock Chung

Department of Internal Medicine, Institute of Gastroenterology, Yonsei University College of Medicine, Seoul, Korea

- 505 patients Jan 2005 - Dec 2014
- 73 had AP with obstructed biliary tree with no cholangitis
- No difference in ERCP-related complication or total length of stay between emergency (24 hours) early (72 hours)

- American College of Surgeons recommends:

- Emergency ERCP (within 24 hours) for severe pancreatitis with cholangitis

- Early ERCP (72 hours) for severe pancreatitis with obstructed biliary system but no cholangitis

- No role for ERCP in severe pancreatitis without biliary obstruction or cholangitis

AMERICAN COLLEGE OF SURGEONS

Inspiring Quality:
Highest Standards, Better Outcomes

100+years

ROLE OF SURGEON

- Working in combined multidisciplinary team in care of patients with pancreatitis
- Providing surgical option for failed percutaneous / endoscopic (MIRP / laparoscopic / open)
- Emergency surgery for NOMI / ischaemic colon / uncontrolled sepsis / fistulation
- Role of early cholecystectomy for mild / moderate GSP
- Role of cholecystectomy for idiopathic pancreatitis

THANK YOU