



# ĐIỀU TRỊ SỎI TRONG GAN BẰNG NÓI MẬT-RUỘT

# Sỏi trong gan - Đặc điểm?

- Đặc trưng của Đông Á - Việt Nam
- Sỏi nguyên phát - Sinh bệnh học “?”
  - Phòng ngừa “?”
- Kèm hẹp đường mật trong gan: 40-96%
  - Cơ sở phân loại sỏi trong gan
  - Sốt + Tái phát cao
- Biến chứng: Xơ gan – K ĐM

# Sỏi trong gan – Sinh bệnh học?

**Viêm đường mật  
tăng sản mạn tính**  
Chronic proliferative  
cholangitis (CPC)

World J Surg (2009) 33:2155–2160  
DOI 10.1007/s00268-009-0154-8

World Journal  
of Surgery

## **Significance of Controlling Chronic Proliferative Cholangitis in the Treatment of Hepatolithiasis**

Fu Yu Li · Nan Sheng Cheng ·  
Hui Mao · Li Sheng Jiang · Jing Qiu Cheng ·  
Quan Sheng Li · Sanjay Munireddy

2156

**CPC as a poor prognostic factor in patients  
with hepatolithiasis**

**CPC as a reason for the refractory characteristics  
of biliary infection**

World J Surg (2009) 33:2155–2160

**CPC management as a potential approach to treat  
hepatolithiasis**

**CPC as a target for prevention and treatment  
of intrahepatic calculi**

# Sỏi trong gan – Sinh bệnh học?

## **CPC as an important factor in the pathogenesis of intrahepatic calculi**

First, papillary hyperplasia in the biliary mucosa, inflammatory cell infiltration, and fibrous thickening in the ductal wall, which combine to result in the deformation, obstruction, and even stricture of the bile duct lumen.

Second, mucoglycoprotein secretion, especially of acidic elements, by the hyperplastic submucosal glands and mucosal epithelia. Obviously such secretion increases in the bile ducts with CPC, which further enhances the bile viscosity and bile stasis [8, 40, 43]. Bile stasis along with biliary stenosis leads to bacterial colonization and infection, which in turn stimulates more mucin secretion.

Third, the increase of acidic mucoglycoprotein in the diseased bile duct, causing a decrease in the pH value of bile and providing a favorable microenvironment that facilitates the lithogenic role of bacterial  $\beta$ -glucuronidase in the deconjugation of bilirubin diglucuronide



# Sỏi trong gan – Sinh bệnh học?

## The Puzzle and Challenge in Treating Hepatolithiasis

*Surg Laparosc Endosc Percutan Tech* • Volume 25, Number 1, February 2015

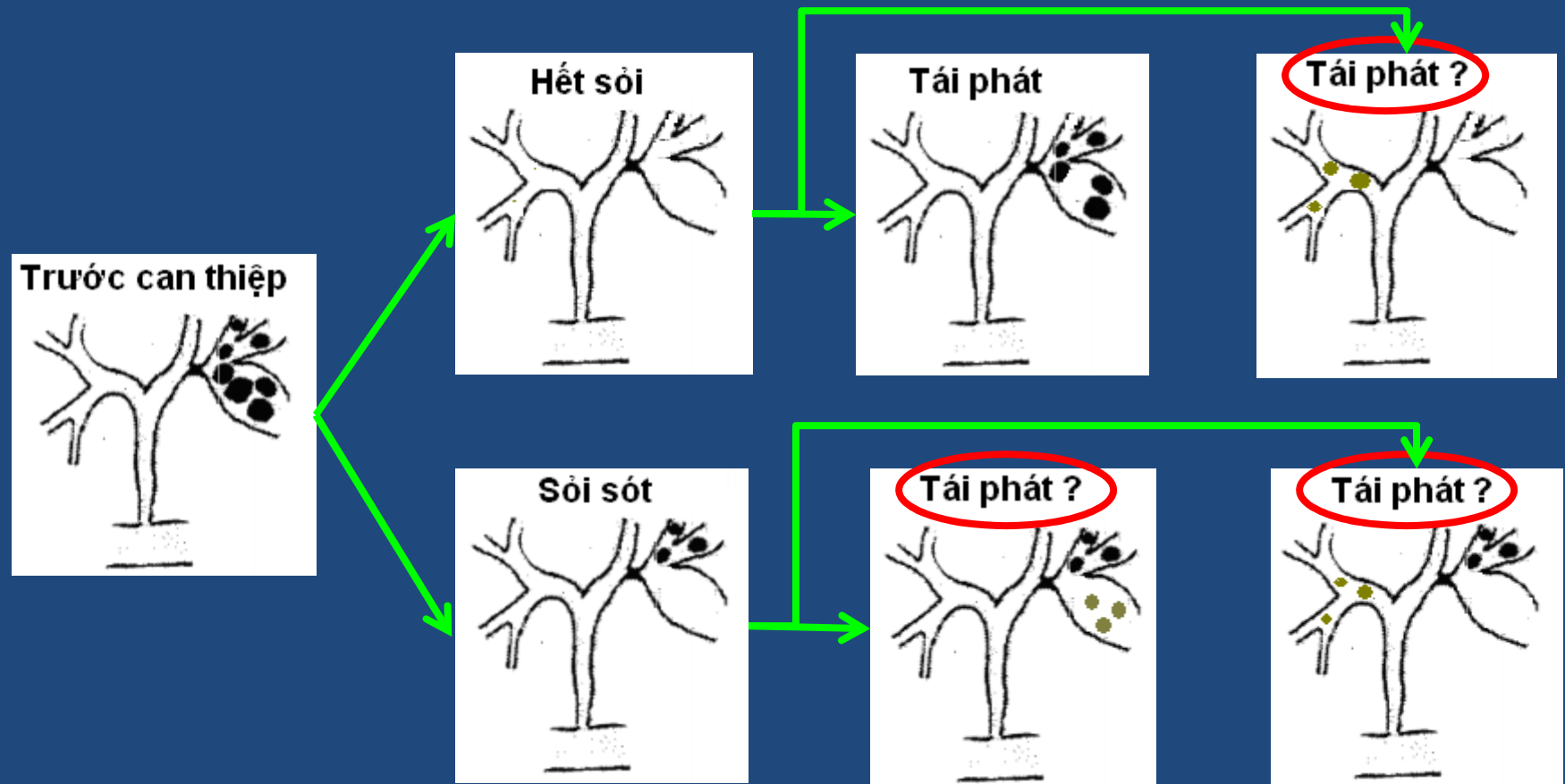
Wen-jie Ma, MD\*  
Yong Zhou, MD\*  
Qin Yang, MD\*  
Fu-yu Li, MD\*

Multiple factors for the lithogenesis of pigment stones have brought enormous difficulties to its prevention and treatment. Despite many theories concerning the lithogenesis, it has become more and more evident that 75% to 100% of hepatolithiasis cases in Asia are pathologically characterized by chronic proliferative cholangitis.<sup>3-5</sup> In recent years, with a deeper understanding of pathologic changes in hepatolithiasis, more and more attention has been paid to the relationship of chronic proliferative cholangitis with stone recurrence and biliary restenosis.

There are some reports in treating chronic proliferative cholangitis with paclitaxel or specific blockage of the proliferation-related gene expression such as E2F decoy, C-myc, or proliferating cell nuclear antigen using antisense gene therapy.<sup>3</sup> Although the above antiproliferative treatment using cytostatic gene therapies are likely to open a novel approach for the antiproliferative treatment of chronic proliferative cholangitis associated with hepatolithiasis, future studies addressing construction of a more efficient gene expression vector, long-term effectiveness, and related complications are still necessary before clinical application.

# Sỏi trong gan – Tái phát?

- Sỏi tái phát: mới hình thành sau khi đã lấy hết “ở cùng vị trí hay bất kỳ” ?



# Mục tiêu điều trị?

- Lấy sỏi
- Tái lập lưu thông mật
- Chống tái phát
- Chống ung thư ĐM

# Các phương pháp điều trị?

Phương pháp		Sạch	Tái phát	K ĐM	Nhược điểm
Cắt gan (2006 - 2012)		94,5 – 97,9	4,2 - 5,2	↓	Chỉ định Biến chứng
Lấy sỏi	Qua da (2001 - 2005)	72 - 90	35 - 51	5 - 10	Tái phát K ĐM
	Mở OMC (2005 - 2012)				



# Chọn lựa phương pháp điều trị?

- Nhiều phân loại

*Intractable & Rare Diseases Research. 2012; 1(4):151-156.*

151

*Review*

DOI: 110.5582/irdr.2012.v1.4.151

## **Classification and management of hepatolithiasis: A high-volume, single-center's experience**

**Xiaobin Feng<sup>1</sup>, Shuguo Zheng<sup>1</sup>, Feng Xia<sup>1</sup>, Kuansheng Ma<sup>1</sup>, Shuguang Wang<sup>1</sup>, Ping Bie<sup>1</sup>, Jiahong Dong<sup>1,2,\*</sup>**

Submit a Manuscript: <http://www.wjgnet.com/esps/>  
Help Desk: <http://www.wjgnet.com/esps/helpdesk.aspx>  
DOI: 10.3748/wjg.v21.i7.2169

*World J Gastroenterol* 2015 February 21; 21(7): 2169-2177  
ISSN 1007-9327 (print) ISSN 2219-2840 (online)  
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*ORIGINAL ARTICLE*

**Observational Study**

## **Preliminary study of a new pathological evolution-based clinical hepatolithiasis classification**

Fu-Bao Liu, Xiao-Jun Yu, Guo-Bing Wang, Yi-Jun Zhao, Kun Xie, Fan Huang, Jiang-Ming Cheng, Xin-Rao Wu, Chao-Jie Liang, Xiao-Ping Geng

# Chọn lựa phương pháp điều trị?

Table 1. Dong's classification of hepatolithiasis for use in determining surgical approaches

Type	Definition or content
Type I	Localized stone disease: unilobar or bilobar.
Type II	Diffuse stone disease.
IIa	No atrophy of the hepatic parenchyma or stricture of the intrahepatic bile ducts.
IIb	Segmental atrophy or/and stricture of the intrahepatic bile ducts.
IIc	Biliary cirrhosis and portal hypertension.
Additional Type E	Extrahepatic stones.
Ea	Normal sphincter of Oddi.
Eb	Relaxation of the sphincter of Oddi.
Ec	Stricture of the sphincter of Oddi.

○ Hepatectomy

○ Bilio - Enterostomy

# Chọn lựa phương pháp điều trị?

Table 4. Surgical approaches to treating hepatolithiasis in the literature (2)

Series	Years	Primary treatment	No. patients
Uchiyama <i>et al.</i> 2007 (16)	1971-2006	Hepatectomy	38
Otani <i>et al.</i> 1999 (17)	1980-1996	Hepatectomy	26
Cheung & Kwok 2005 (18)	1989-2003	Hepatectomy	52
Li <i>et al.</i> 2006 (10)	1992-2002	Hepatectomy	161
Nuzzo <i>et al.</i> 2008 (8)	1992-2005	Hepatectomy	34
Cheung <i>et al.</i> 2003 (19)	1993-2001	Percutaneous transhepatic cholangioscopic lithotomy or lithotripsy	79
Li <i>et al.</i> 2005 (20)	1994-2003	Hepatectomy	46
Kim <i>et al.</i> 2006 (21)	1994-2004	Hepatectomy	128
Lee <i>et al.</i> 2007 (22)	2000-2005	Hepatectomy	123
Uemishi <i>et al.</i> 2009 (23)	1980-2007	Hepatectomy	87
Dong JH <i>et al.</i>	1975-2008	Hepatectomy	1,175

# Chọn lựa phương pháp điều trị?

## ORIGINAL ARTICLE

Gastroenterology & Hepatology

<http://dx.doi.org/10.3346/jkms.2013.28.11.1627> • J Korean Med Sci 2013; 28: 1627-1631

JKMS

Risk Factors for Long-term Outcomes after Initial Treatment in  
Hepatoolithiasis

Jin-Seok Park,<sup>1</sup> Seok Jeong,<sup>1,2</sup>  
Don Haeng Lee,<sup>1,2,3</sup> Byoung Wook Bang,<sup>1</sup>  
Jung Il Lee,<sup>1</sup> Jin-Woo Lee,<sup>1</sup>  
Kye Sook Kwon,<sup>1</sup> Hyung Kil Kim,<sup>1</sup>  
Yong Woon Shin,<sup>1</sup> Young Soo Kim,<sup>1</sup>  
and Shin Goo Park<sup>4</sup>

## Percutaneous transhepatic cholangioscopic treatment for hepatolithiasis: an evaluation of long-term results and risk factors for recurrence

Sung-Koo Lee, MD, Dong-Wan Seo, MD, Seung-Jae Myung, MD, Eun-Taek Park, MD, Byeong-Cheol Lim, MD, Hong-Ja Kim, MD, Kyo-Sang Yoo, MD, Hyun-Ju Park, MD, Yeon-Ho Joo, MD, Myung-Hwan Kim, MD, Young-Il Min, MD

Seoul, Korea

Surg Endosc (2005) 19: 505-509  
DOI: 10.1007/s00464-004-8125-5

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and Other Interventional Techniques

## Reappraisal of percutaneous transhepatic cholangioscopic lithotomy for primary hepatolithiasis

C.-H. Chen,<sup>1</sup> M.-H. Huang,<sup>1</sup> J.-C. Yang,<sup>1</sup> C.-C. Yang,<sup>1</sup> Y.-H. Yeh,<sup>1</sup> H.-S. Wu,<sup>1</sup> D.-A. Chou,<sup>1</sup> S.-K. Yueh,<sup>1</sup>  
C.-K. Nien<sup>2</sup>

- Nguy cơ tái phát: **Hẹp đường mật - Sỏi sỏi**

# Chọn lựa phương pháp điều trị?

- **Nguy cơ tái phát:**

- Đã xác định tái phát
- Hẹp đường mật
- Không lấy hết sỏi

- **Can thiệp dự kiến:** Lấy sỏi tái phát

→ **Tạo ngõ vào lâu dài:**

Túi mật

Nối mật-ruột-da (MRD)

Đoạn ruột biệt lập (ĐRBL)



# Nối mật-ruột?

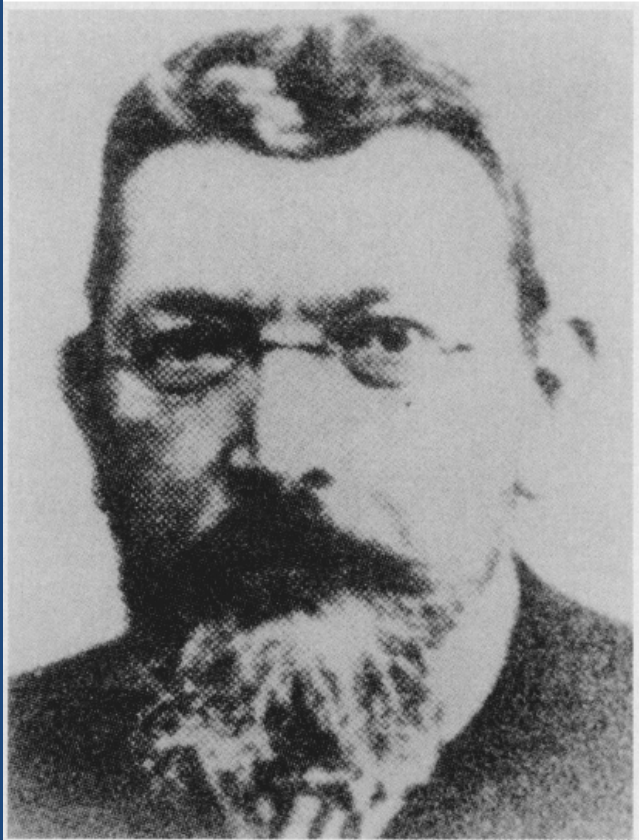


Fig 1. —Alexander von Winiwarter performed a cholecystocolostomy in 1880<sup>4,6</sup> (from Rutledge<sup>5</sup>).

## A History of the Bilioenteric Anastomosis

Steven A. Ahrendt, MD, Henry A. Pitt, MD

- The bilioenteric anastomosis has played an integral role in the surgical management of biliary tract disease during the past century. A wide variety of techniques for suturing a portion of the biliary tract to the digestive tract have been described since von Winiwarter's first cholecystoenterostomy. Many types of biliary stents have also been developed, although their exact role remains controversial. Many advances in preoperative and postoperative care have contributed to the low morbidity and mortality of current reconstructive biliary tract surgery. (*Arch Surg.* 1990;125:1493-1500)

Alexander von Winiwarter , 1880

# Nổi mật-ruột-da?

*Chinese Medical Journal*, 3(5):413-418, November 1977.

## **SUBCUTANEOUS BLIND LOOP – A NEW TYPE OF HEPATICOCHOLEDOCHOJEJUNOSTOMY FOR BILATERAL INTRAHEPATIC CALCULI**

Fang Kan 方干 and Chou Tsung-chih 周宗智

*Surgery Department, Capital Hospital, Chinese Academy of Medical Sciences,  
Peking; and Surgery Department, First Hospital of Shihhotzu  
Medical School, Sinkiang*

# Nối mật-ruột-da?

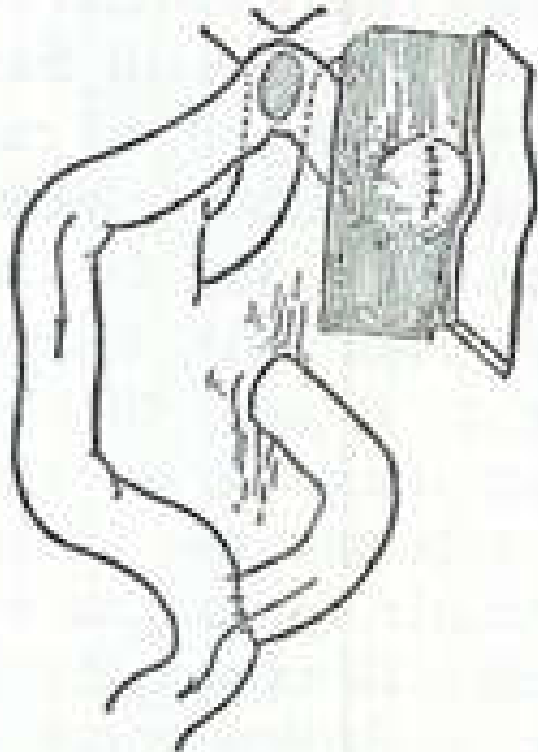


Fig. 1. Subcutaneous blind loop hepaticocholechojunostomy, Roux-Y Type anastomosis.

- Nối mật-ruột tận-bên hoặc bên-bên
- Nối Roux – Y
- Quai Roux 60-80cm
- Đoạn ruột ra da 5-7cm
- Đính vào phúc mạc

# Nổi mật-ruột-da – Kết quả?

## *Long-Term Results of Hepaticojejunostomy for Hepatolithiasis*

TOSHIOMI KUSANO, M.D., F.A.C.S.,\*† TSUTOMU ISA, M.D.,\* YOSHIHIRO MUTO, M.D.,\* MITSUJI OTSUBO, M.D.,‡  
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World J Gastroenterol 2006 July 14; 12(26): 4170-4174  
World Journal of Gastroenterology ISSN 1007-9327  
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CLINICAL RESEARCH

## **Hepaticojejunostomy for hepatolithiasis: A critical appraisal**

Shao-Qiang Li, Li-Jian Liang, Bao-Gang Peng, Jia-Ming Lai, Ming-De Lu, Dong-Ming Li

2010

Does bilioenteric anastomosis impair results of liver resection in primary intrahepatic lithiasis?

WORLD JOURNAL OF GASTROENTEROLOGY, v.16, n.27, p.3423-3426, 2010

ANNALS OF SURGERY  
Vol. 234, No. 2, 210-214  
© 2001 Lippincott Williams & Wilkins, Inc.

Late Development of Bile Duct Cancer in Patients Who Had Biliary-Enteric Drainage for Benign Disease: A Follow-Up Study of More Than 1,000 Patients

Adriano Tocchi, MD, FACS, Gianluca Mazzoni, MD, Gianluca Liotta, MD, Luce Lapro, MD, PhD, Diletta Cassini, MD, and Michelangelo Miccini, MD

Viêm ĐM

Trào ngược

Sỏi tái phát

# Vai trò của cơ vòng Oddi

- OGC-OMC chỉ có sợi đàn hồi, không có cơ trơn → không nhu động
- Cơ vòng Oddi giữ chênh lệch áp lực 15 mmHg giữa đường mật-tụy và tá tràng, ngăn trào ngược → duy trì sự vô khuẩn của dịch mật và tụy



# Vai trò của cơ vòng Oddi

Surg Endosc (2015) 29:154–162  
DOI 10.1007/s00464-014-3669-5

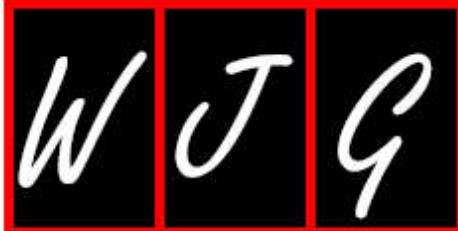


## Endoscopic or laparoscopic approach for hepatolithiasis in the era of endoscopy in China

JingWang Tan · YunChang Tan · Fei Chen ·  
YuL. Zhu · JianJun Leng · JiaHong Dong

*Conclusion* In this study with 2–8 years of follow-up, residual stones, biliary stricture, Sphincter of Oddi dysfunction, and ERCP therapy were associated with recurrent stones and/or cholangitis after treatment, indicating that the modification of Sphincter of Oddi function and maintaining its normal pressure are very important.

# Vai trò của cơ vòng Oddi



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Help Desk: <http://www.wjgnet.com/esps/helpdesk.aspx>  
DOI: 10.3748/wjg.v21.i45.12865

World J Gastroenterol 2015 December 7; 21(45): 12865-12872  
ISSN 1007-9327 (print) ISSN 2219-2840 (online)  
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ORIGINAL ARTICLE

Retrospective Study

## Oddi sphincter preserved cholangioplasty with hepatico-subcutaneous stoma for hepatolithiasis

Until now, the long-term outcomes of OSPCHS and risk factors for recurrence in hepatolithiasis have not been reported. In the current study, we reviewed the cases with hepatolithiasis treated surgically at our center in the past 20 years retrospectively and evaluated the long-term outcomes of OSPCHS and risk factors for recurrence in hepatolithiasis.

# Đánh giá cơ vòng Oddi

- Nội soi đường mật:
  - Lỗ cơ vòng
  - Hoạt động cơ vòng

# Nổi đoạn ruột biệt lập

Hepatobiliary & Pancreatic Diseases International

## Long-term curative effects of combined hepatocholangioplasty with choledochostomy through an isolated jejunum passage on hepatolithiasis complicated by stricture

Yong Li, Jun Cai, An-Tao Wu and Zi-Jian Wang

Nanchang, China

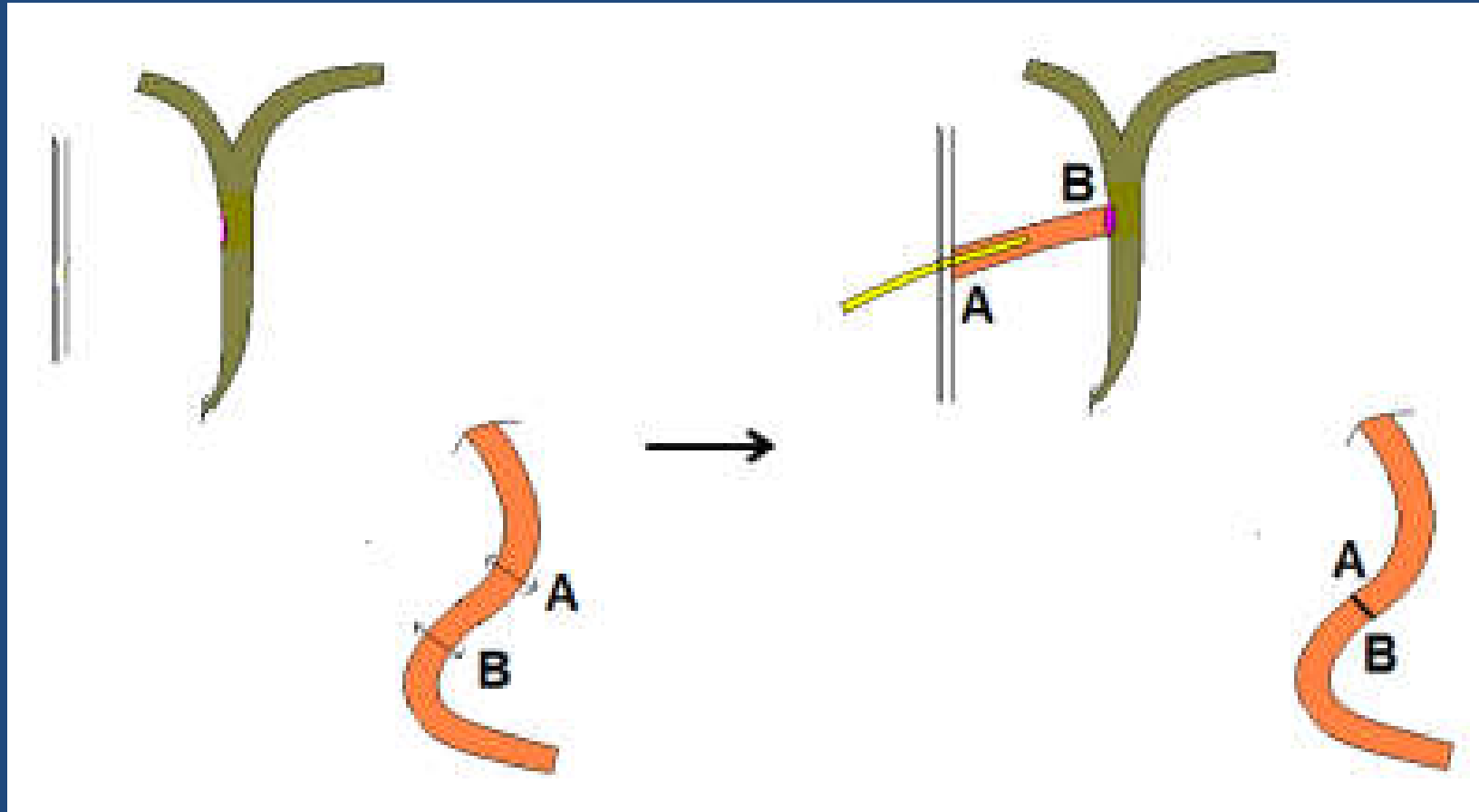
Nghiên cứu Y học

Y Học TP. Hồ Chí Minh \* Tập 20 \* Số 5 \* 2016

KẾT QUẢ LẤY SỎI ĐƯỜNG MẬT TÁI PHÁT QUA ĐƯỜNG HẸM MẬT ĐÀ

Phạm Minh Hải<sup>\*</sup>, Đặng Tâm<sup>\*\*</sup>, Lê Quan Anh Tuấn<sup>\*\*\*</sup>, Vũ Quang Hương<sup>\*\*\*</sup>, Trần Thái Ngọc Huy<sup>\*</sup>,  
Ngô Hoàng Minh Thiện<sup>\*</sup>, Nguyễn Việt Hải<sup>\*</sup>, Nguyễn Hoàng Bắc<sup>\*\*\*</sup>

# Kỹ thuật



Đoạn ruột AB  $\approx$  5-7 cm

Đầu gần (A) khâu dính vào phúc mạc

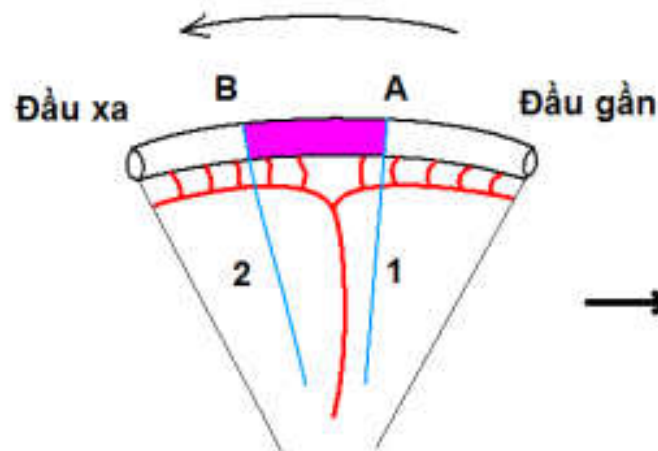


Kỹ thuật

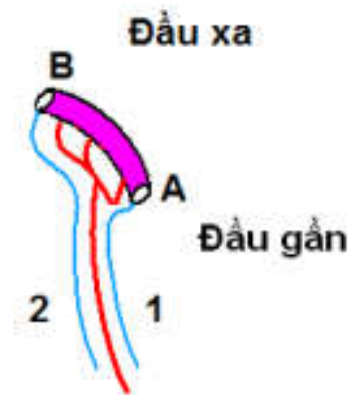
làm dài

mạch treo

ĐRBL

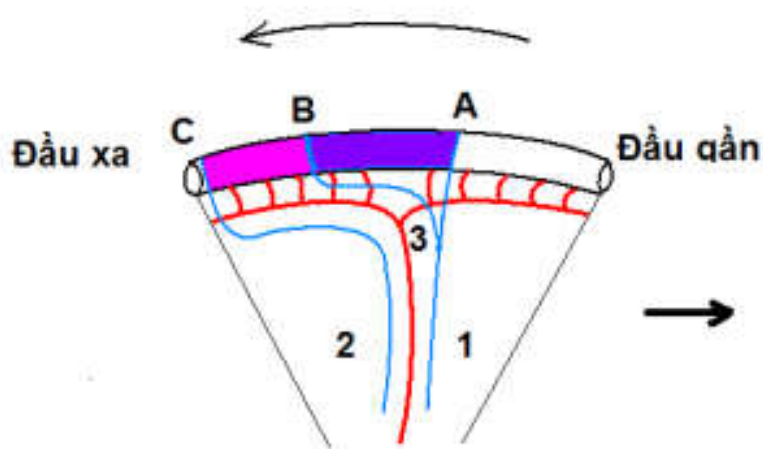


a

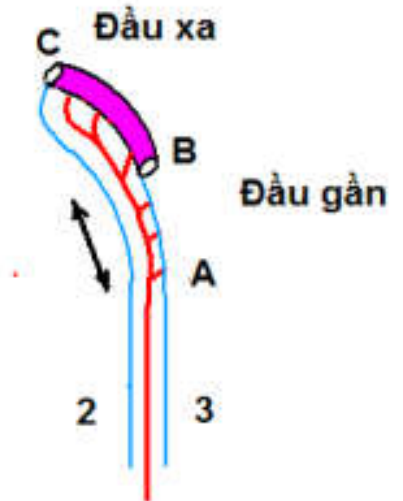


b

Hình 2.6- Kỹ thuật cắt đoạn hồng tràng thông thường



a

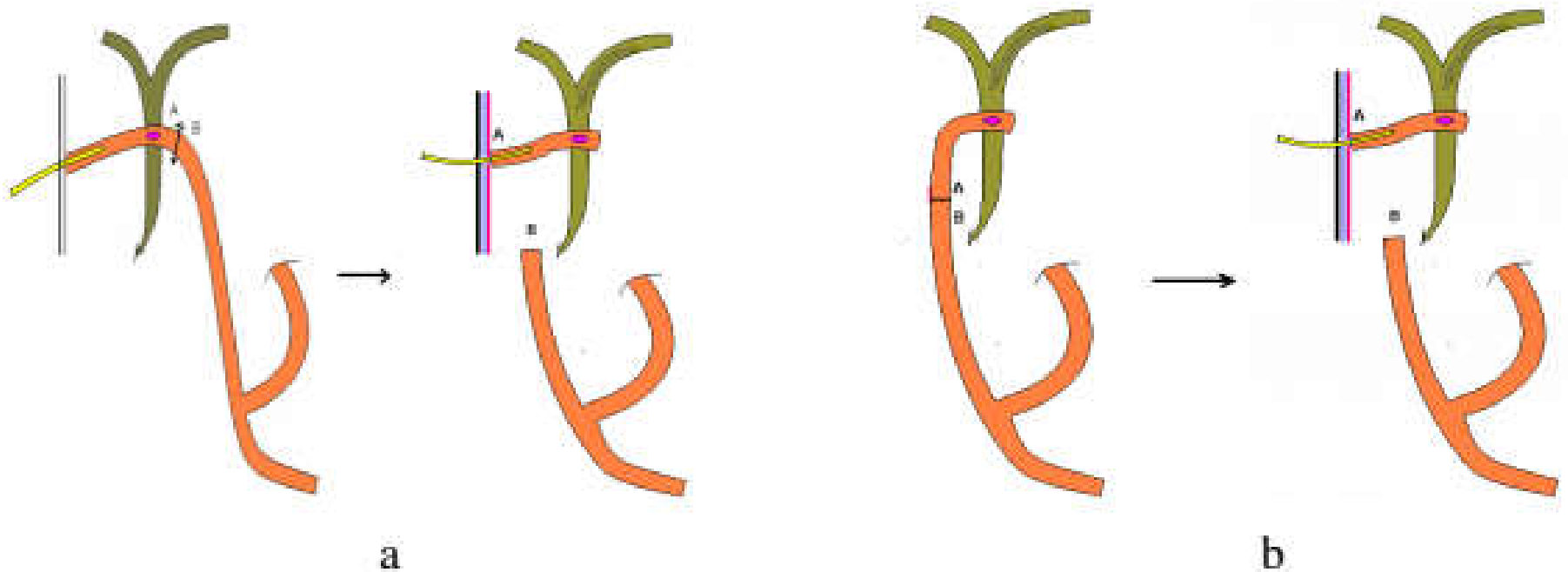


b

Hình 2.7- Kỹ thuật cắt đoạn hồng tràng có làm dài mạch treo

# Kỹ thuật

- Chuyển nối MRD thành nối ĐRBL



Hình 3.2

a- Chuyển NMRD thành NĐRBL

b- Chuyển nối mật-ruột Roux-Y thành NĐRBL

# Nối đoạn ruột biệt lập - Kết quả

The clearance rate of stones after the isolated jejunum passage was 97%; 35 patients (21%) complicated with stricture due to hepatolith were treated with combined hepato-cholangioplasty and choledochostomy. Follow-up for 1 to 15 years showed no recurrent stricture of the biliary tract. The operation also successfully prevented reflux cholangitis and other serious complications after Roux-en-Y cholangio-jejunostomy.

**CONCLUSION:** Hepato-cholangioplasty combined with choledochostomy through an isolated jejunum passage may significantly improve the long-term curative effects of hepatolithiasis with stricture.

# Kết quả lâu dài

**Table 4 Long-term outcomes of surgery**

Long-term outcome	<i>n</i> (%)
Stone recurrence	50 (24.8)
Recurrent attack of acute cholangitis	28 (13.9)
Utilization of subcutaneous stoma	42 (20.8)
Clearance of recurrent stones	42 (84.0)
Development of cholangiocarcinoma	5 (2.5)
Death	11 (5.4)

# Xử lý sỏi tái phát

	NỐI MRD	NỐI ĐRBL
<b>Tạo lại ngõ vào</b>	<b>+</b>	<b>++</b>
<b>Nội soi lấy sỏi</b>	<b>++</b>	<b>+</b>

**+ Thuận lợi**

# Chỉ định

- **Tạo ngỗ vào lâu dài với nối ĐRBL:**
  - Cơ vòng Oddi bình thường
  - Tạo hình hẹp đường mật
- **Tạo ngỗ vào lâu dài với nối MRD:**
  - Hẹp OMC – Oddi
  - Giãn Oddi (trào ngược sau ERCP)

# Kết luận

- **Vì kết quả điều trị lâu dài sỏi trong gan:**
  - Xem xét chỉ định cắt gan
  - Vai trò cơ vòng Oddi (ERCP?)
  - Ngõ vào lâu dài





**TRÂN TRỌNG CẢM ƠN**