

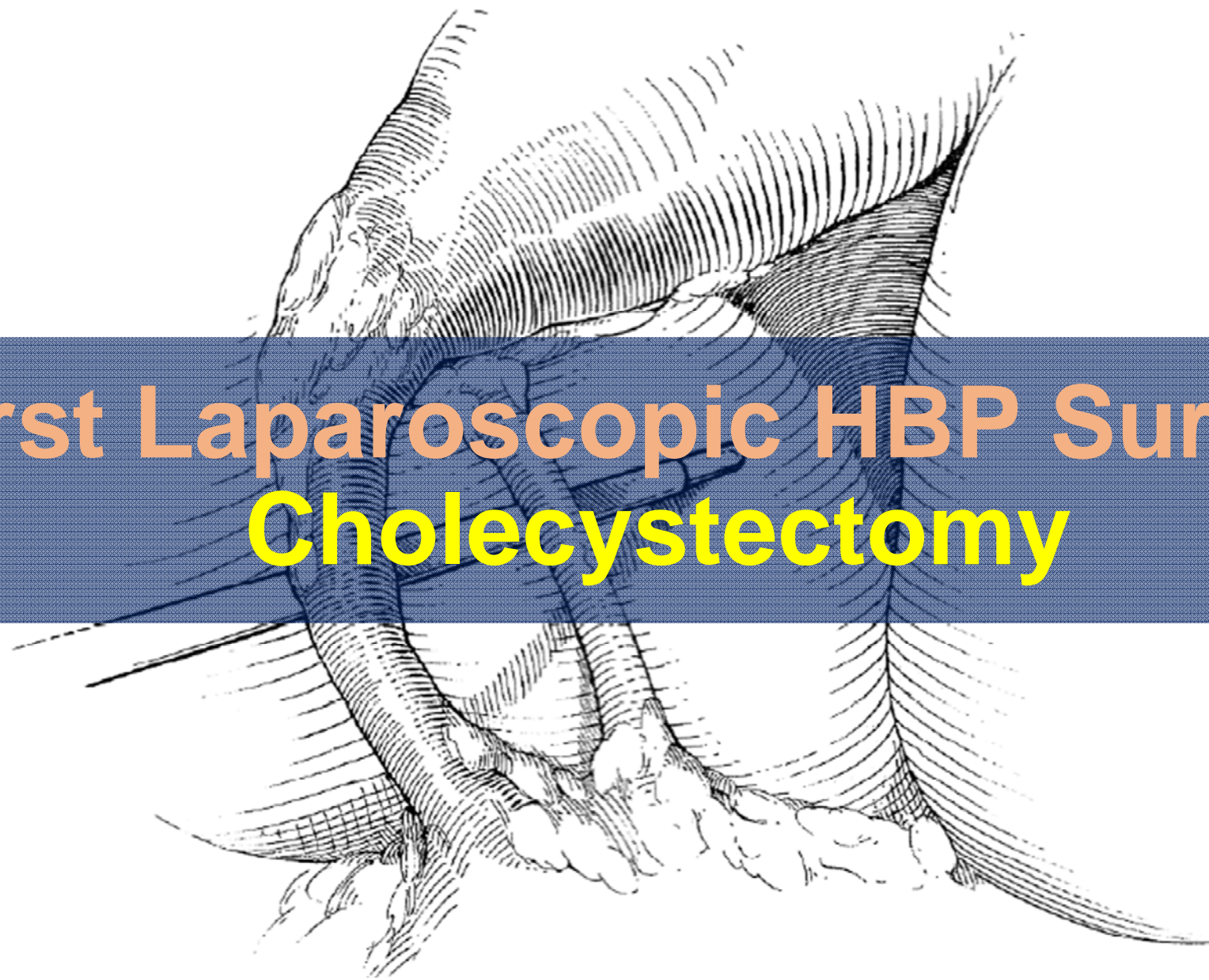
East meets west

Pioneers in Laparoscopic HBP Surgery

Yoshihiro Miyasaka¹, Masafumi Nakamura¹ and Go Wakabayashi²

¹Department of Surgery and Oncology, Graduate School of Medical Sciences, Kyushu University

² Department of Surgery, Ageo Central General Hospital

An anatomical illustration of the gallbladder and biliary system. The gallbladder is shown as a pear-shaped sac with a textured, bumpy surface, located in the lower right quadrant of the abdomen. It is connected to the common bile duct, which is shown as a tube. The surrounding area is filled with fine lines representing the liver and other abdominal structures. A dark blue horizontal band is superimposed over the middle of the illustration, containing the title text.

First Laparoscopic HBP Surgery Cholecystectomy

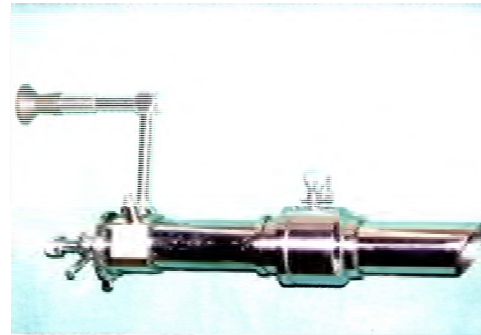
Eric Mühe



1985/Sep/12 **First Performed** laparoscopic cholecystectomy

Under pneumoperitonium

Using Galloscope (Direct vision)



1986/Apr **Presentation** at Congress of the German Surgical Society

296. Die erste Cholecystektomie durch das Laparoskop

E. Mühe

Kreiskrankenhaus, Postfach 1548, D-7030 Böblingen

The First Laparoscopic Cholecystectomy

Summary. I performed the first laparoscopic cholecystectomy in September 1985. The procedure has been developed into a remarkably simple, safe, and quick method, requiring 30–45 min to be completed. The main advantage is the reduced operative trauma with all the associated benefits in the postoperative period.

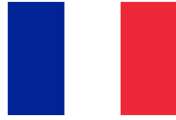
Key words: Endoscopic cholecystectomy.

Zusammenfassung. Die laparoskopische Cholecystektomie wurde erstmals durch mich im September 1985 durchgeführt. Die Methode ist zu einem besonders einfachen, sicheren und schnellen Routine-Eingriff gereift. Die Operations-Dauer beträgt 30 bis 45 min. Hauptvorteile sind das wesentlich verringerte Operationstrauma mit den sich daraus ergebenden erfreulichen Konsequenzen.

Schlüsselwörter: Laparoskopische Cholecystektomie.

Langenbecks Archiv für Chirurgie 1986;369:804

Philippe Mouret



1987/Mar Performed LC

Following gynecologic laparoscopy

Using video-laparoscope



No published scientific report available.

However, introduced as the first surgeon who performed LC in English journal.

The European Experience with Laparoscopic Cholecystectomy

Alfred Cuschieri, MD, ChM, FRCS, Dundee, Scotland, Francois Dubois, MD, Paris, France, Jean Mouiel, MD, FACS, Nice, France, Phillipe Mouret, MD, Lyon, France, Hans Becker, MD, Gerhardt Buess, MD, Tübingen, Germany, Michael Trede, MD, Mannheim, Germany, Hans Troidl, MD, Köln-Merheim, Germany

Am J Surg 1991;161: 385-387

The advent of laparoscopic cholecystectomy has been a significant milestone not only in the treatment of gallstone disease, but in the evolution of surgical treatment toward the minimal-access approach, the aim of which is intended to minimize the trauma of access without compromising the exposure of the surgical field. Laparoscopic cholecystectomy originated in Europe, with the first successful case being performed by Phillipe Mouret in 1987 (personal communication). Although well established in several centers [1-5], there are different practices and techniques used, and to date it has not been

Francois Dubois (France)

1988/Apr Performed LC as the third surgeon.

1989/May **First reported LC** in '*La Presse Medicale*' in **French**. La Presse Medicale 1989;18:980-982

Jacques Perissat (France)

1988/Oct Performed LC

1989/Apr Presented his video at the SAGES

1989/Dec Reported in '*Endoscopy*' (**First report in English**)

LC spread to Europe, North America and over the world.

Endoscopy 1989;21:373-374

Tatsuo Yamakawa (Japan)

1990/May/29 First LC in Japan (First report of LC in Japanese).

Rinsho Geka 1990;45(10):1255-1259

G Navarra (Italy)

1997/May First report of single-incision laparoscopic cholecystectomy.

Br J Surg 1997;84:695

Go Wakabayashi (Japan)

2000/Mar/13 Robotic cholecystectomy (First robotic surgery in Asia).

J Hepatobiliary Pancreat Sci 2011;18(4):481-487

National Institute of Health



1992/Sep NIH Consensus Statement

'Gallstones and Laparoscopic Cholecystectomy'

Among their findings, the panel concluded that (1) most patients who experience symptoms of gallstones should be treated; (2) in comparison with open cholecystectomy, laparoscopic cholecystectomy provides a safe and effective treatment for most patients with symptomatic gallstones and has become the treatment of choice for many patients; (3) patients who are not good candidates for laparoscopic cholecystectomy include those with generalized peritonitis, septic shock from cholangitis, severe acute pancreatitis, end-stage cirrhosis, and gallbladder cancer; (4) laparoscopic cholecystectomy decreases pain and disability without increasing mortality and morbidity and can be performed at an equal or lower cost than open cholecystectomy; and (5) every effort should be made to ensure that surgeons performing laparoscopic cholecystectomy are properly trained and credentialed.

NIH Consensus Statement

Volume 10, Number 3
September 14-16, 1992



Gallstones and Laparoscopic Cholecystectomy

Steven M Strasberg

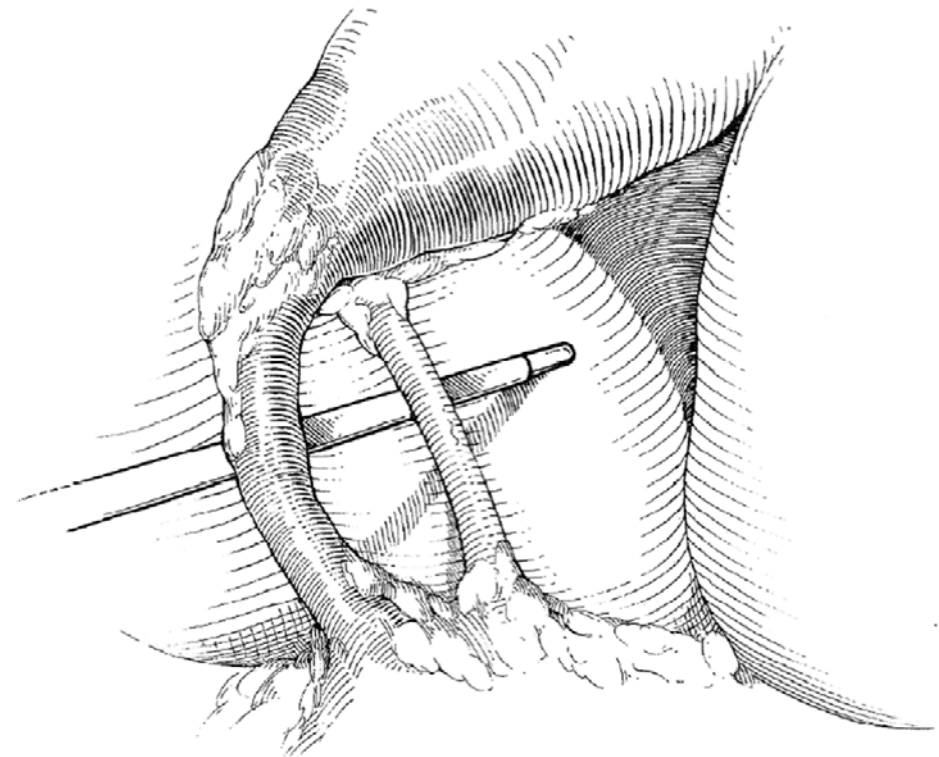


1995/Jan Proposed 'critical view of safety'

AN ANALYSIS OF THE PROBLEM OF BILIARY INJURY DURING LAPAROSCOPIC CHOLECYSTECTOMY

Steven M. Strasberg, M.D., F.R.C.S.(C), F.A.C.S., Martin Hertl, M.D., *and*
Nathaniel J. Soper, M.D., F.A.C.S.

FIG. 7. Critical view. Calot's triangle is dissected free of all tissue except for the cystic duct and artery and the base of the liver bed is exposed. When this view is achieved, the two structures entering the gallbladder can only be the cystic duct and artery.



J Am Coll Surg 1995;180:101-125



Expansion of laparoscopy beyond LC

Choledochal cyst

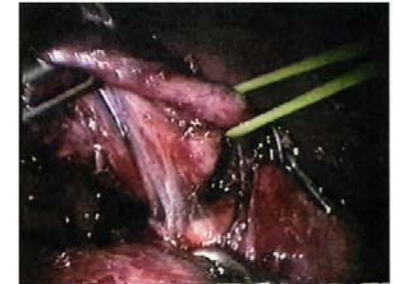


1995/Oct First report of laparoscopic cystectomy and biliary reconstruction for a **pediatric case** of choledochal cyst

Surgical Laparoscopy & Endoscopy
Vol. 5, No. 5, pp. 354-358
© 1995 Lippincott-Raven Publishers, Philadelphia

Congenital Choledochal Cyst: Video-Guided Laparoscopic Treatment

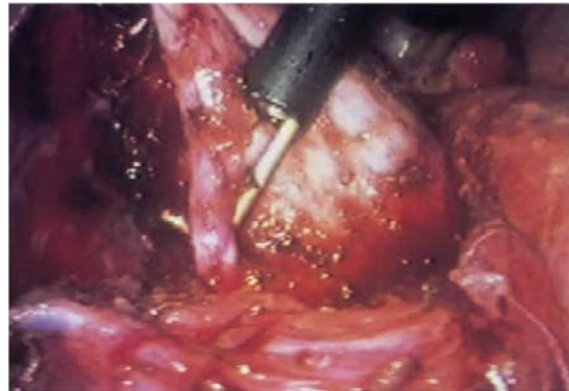
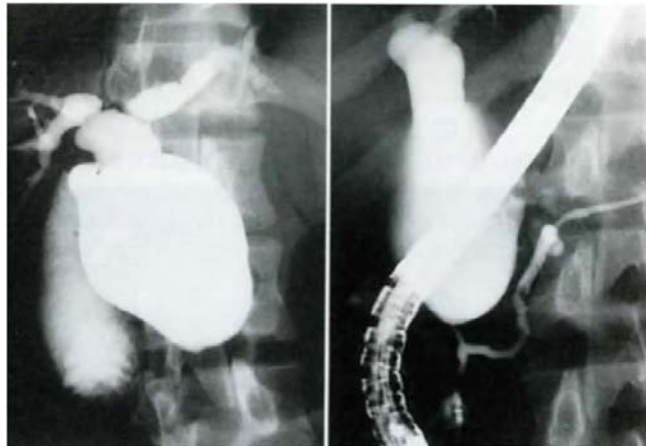
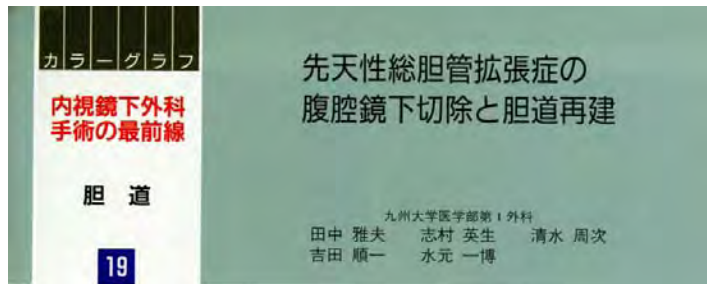
G. A. Farelo, M.D., A. Cerofolini, M.D., M. Rebonato, M.D., G. Bergamaschi, M.D.,
C. Ferrari, M.D., and A. Chiappetta, M.D.



Masao Tanaka



1996/Jul First report of laparoscopic cystectomy and biliary reconstruction for an **adult case** of choledochal cyst (*in Japanese*)



Rinsho Geka 1996;51(7):813-818



Laparoscopy in Complicated HBP Hepatectomy

Harry Reich

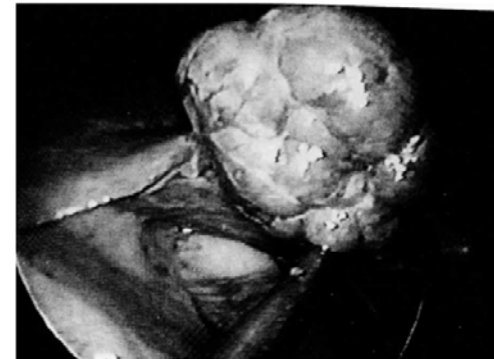


1991/Nov **First report of laparoscopic liver resection** during gynecologic operation.
(partial resection)

LAPAROSCOPIC EXCISION OF BENIGN LIVER LESIONS

*Harry Reich, MD, Fran McGlynn, CRNP, MS,
John DeCaprio, MD, and Robert Budin, MD*

Increasing sophistication in laparoscopic instrumentation and techniques has led to an ever-expanding list of surgical indications that are no longer exclusive to gynecology. This report describes our experience with three women who had benign lesions of the liver edge found incidentally during laparoscopic surgery for gynecologic symptoms. The first woman was managed traditionally with subsequent exploratory laparotomy; she developed ileus postoperatively and required a 5-day hospital stay. The other two were managed laparoscopically without incident. Each was hospitalized



less than 24 hours. All three liver lesions proved benign on histologic examination. Although not all liver lesions can or should be excised laparoscopically, selected superficial neoplasms can be managed expediently by a laparoscopic approach. (*Obstet Gynecol* 78:956, 1991)

Obstet Gynecol 1991;78:956-958

Prior to the report of Gagner

LAPAROSCOPIC PARTIAL HEPATECTOMY FOR LIVER TUMOR

M. Gagner, M.D., FRCSC; M. Rheault, M.D., FRCSC, FACS;
J. Dubuc, M.D., FRCSC. Department of Surgery and Gynecology, Hôtel-Dieu de Montréal, University of Montreal.

Surg Endosc 1992;6:85-110

Tohru Nagashima



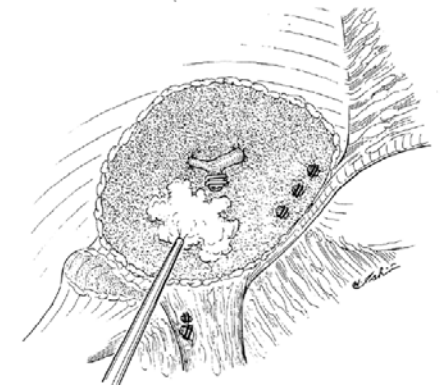
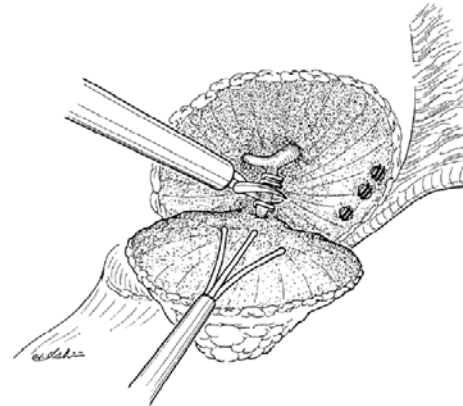
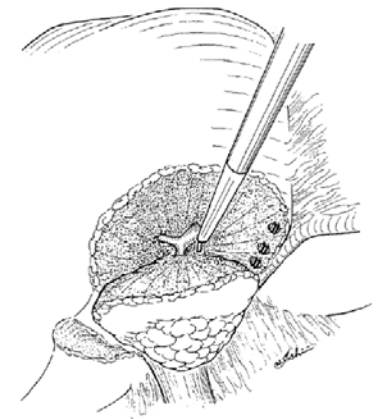
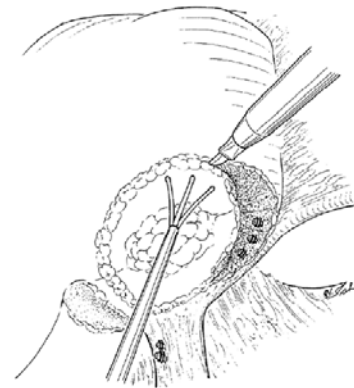
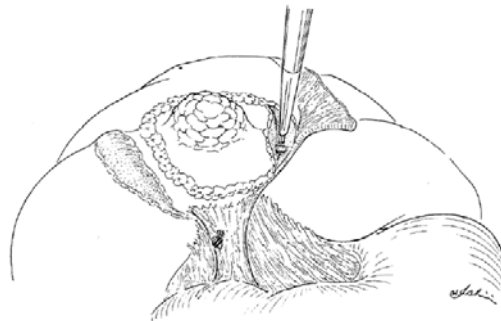
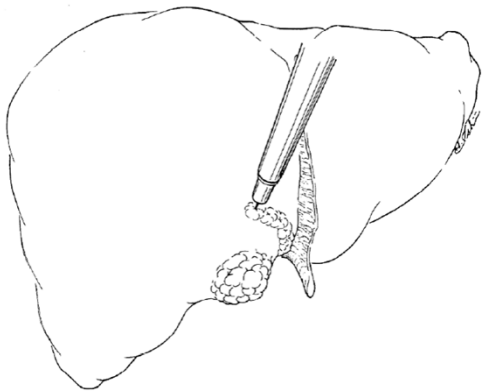
1994/Jun

First report of laparoscopic partial resection of the liver **for HCC** (in *Japanese*).

手術 第48巻 第6号 1994

肝腫瘍に対する腹腔鏡下肝切除術

長島 通* 榎本 和夫*
浅野 武秀* 磯野 可一**

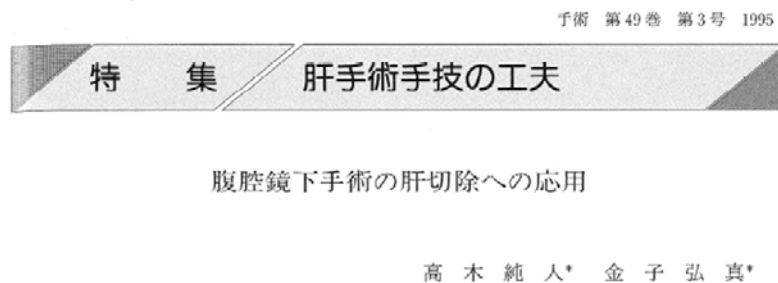


Shujutsu 1994;48(6):895-900

Hironori Kaneko



1995/Mar First report of laparoscopic **anatomical liver resection** in Japanese.
(in English, 1996/Sep)



Shujutsu 1995;49(3):345-354



Surgery 1996;120(3):468-475

Laparoscopic partial hepatectomy and left lateral segmentectomy: Technique and results of a clinical series

Hironori Kaneko, MD, Sumito Takagi, MD, and Tadaaki Shiba, MD, Tokyo, Japan

Prior to the report of Azagra

Laparoscopic anatomical (hepatic) left lateral segmentectomy—technical aspects

J. S. Azagra,¹ M. Goergen,¹ E. Gilbert,² D. Jacobs²

¹Department of Digestive and Laparoscopic Surgery, CHU—André Vesale, 706, route de Gooze, 6110 Montigny-le-Tilleul, Belgium
²Department of Anaesthesia, CHU—André Vesale, 706, route de Gooze, 6110 Montigny-le-Tilleul, Belgium

Received: 1 November 1994/Accepted: 9 August 1995

Surg Endosc 1996;10(7):758-761

C. G. S. Huscher



1997/Aug

First report of **laparoscopic major hepatectomy**.

J. R. Coll. Surg. Edinb., 42, August 1997, 219—225

Laparoscopic surgery section

Current position of advanced laparoscopic surgery of the liver

C. G. S. HÜSCHER,* M. M. LIRICI,† S. CHIODINI* AND A. RECHER*

*Department of General Surgery, Ospedale Vallecannonica, Esine, Italy and †4th Department of Surgery, University La Sapienza, Rome, Italy



Patient	Procedure	Portal triad occlusion	Type	Occlusion time (min)	Operative time (min)	Blood loss (mL)	Normal liver function (day)
1	Segmentectomy VI	No			200	100	—
2	Left hepatectomy	Pringle	Interrupted	80	200	550	6
3	Segmentectomy V, gastric banding	No			120	0	
4	Mesopatectomy	Pringle		35	155	200	4
5	Left hepatectomy	Pringle		30	165	300	4
6	Segmentectomy VI	Pringle		40	210	100	8
7	Segmentectomy V	Pringle		40	200	1000	5
8	Right hepatectomy	Pringle		45	200	100	4
9	Left hepatectomy	Pringle		35	160	100	3
10	Right hepatectomy	Pringle		45	190	200	5
11	Mesopatectomy	Pringle	Interrupted	50	180	100	4
12	Left hepatectomy	Pringle		20	195	100	—
13	Right hepatectomy	Pringle	Interrupted	65	240	1000	5
14	Mesopatectomy	Pringle	Interrupted	75	285	1200	6
15	Segmentectomy V	Pringle		30	180	900	5
16	Left hepatectomy	Pringle		40	170	500	5
17	Right hepatectomy	Pringle	Interrupted	55	185	100	5
18	Left hepatectomy, right colectomy	Pringle		35	270	100	3
19	Bisegmentectomy V, VI	Pringle		40	160	100	4
20	Extended right hepatectomy	No	Separate ligation at hilum		195	1200	
				44.41	193	397.5	5

J R Coll Surg Edinb 1997;42:219-225

Daniel Cherqui

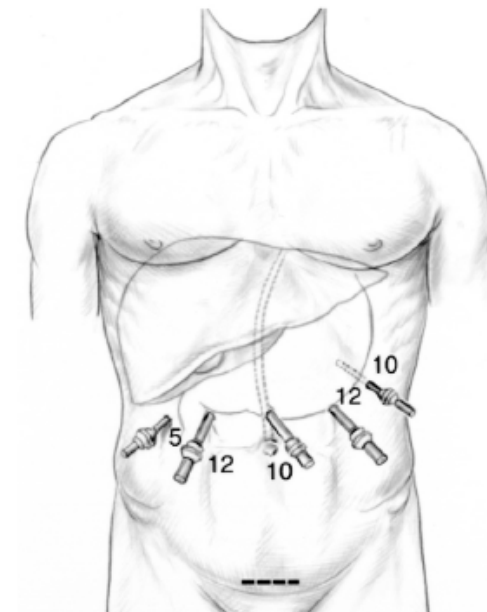
2002/Feb First report of laparoscopic **donor hepatectomy**.
(left lateral sectionectomy)

ARTICLES

Laparoscopic living donor hepatectomy for liver transplantation in children

Daniel Cherqui, Olivier Soubrane, Emmanuel Husson, Eric Barshasz, Olivier Vignaux, Mourad Ghimouz, Sophie Branchereau, Christophe Chardot, Frédéric Gauthier, Pierre-Louis Fagniez, Didier Houssin

	Donor 1	Recipient 1	Donor 2	Recipient 2
Characteristic				
Age (years)	27	1	31	1
Relationship	Mother	Son	Father	Son
Weight (kg)	60	8.3	80	7.3
Height (cm)	162	70	182	66
Blood type	0	0	0	0
Graft volume*(mL)	250		280	
GRBWR†		3.5%		3.8%



Lancet 2002;359:392-369

Isao Kurosaki



2006/May First report of laparoscopic donor right hepatectomy.

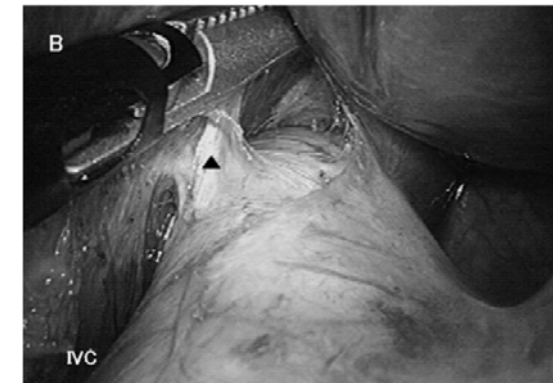
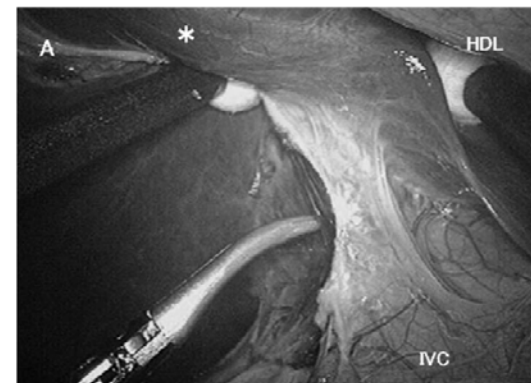
Brief clinical report

Video-assisted living donor hemihepatectomy through a 12-cm incision for adult-to-adult liver transplantation

Isao Kurosaki, MD, Satoshi Yamamoto, MD, Chie Kitami, MD, Naoyuki Yokoyama, MD, Hideki Nakatsuka, MD, Takashi Kobayashi, MD, Takaoki Watanabe, MD, Hiroshi Oya, MD, Yoshinobu Sato, MD, and Katsuyoshi Hatakeyama MD, FACS, Niigata, Japan

Table 1. Comparison between video-assisted and standard procedures: Donors' perioperative characteristics

Analyzed factors	Video-assisted (n = 13)	Standard (n = 13)	P value
Pre- and intraoperative variables			
Male/female	8/5	9/4	NS
Age (y, median \pm SD)	39.0 \pm 12	31.0 \pm 10	NS
Body mass index (median \pm SD)	22.8 \pm 2.7	21.4 \pm 3.5	NS
Left/right hemihepatectomy	10/3	12/1	NS
Use of hanging maneuver	10 (77%)	13 (100%)	NS
Operative time (min, median \pm SD)	363 \pm 32.7	320 \pm 67.9	NS
Blood loss (g, median \pm SD)	302 \pm 191	283 \pm 371	NS
Graft volume (mL, median \pm SD)	420 \pm 92.9	433 \pm 72.3	NS
Postoperative variables			
AST: POD 1, 7 (UL ⁻¹ , median \pm SD)	244 \pm 113, 68 \pm 52	205 \pm 72, 54 \pm 28	NS
ALT: POD 1, 7 (UL ⁻¹ , median \pm SD)	298 \pm 86, 120 \pm 94	240 \pm 131, 110 \pm 69	NS
Total bilirubin: POD 1, 7 (UL ⁻¹ , median \pm SD)	1.1 \pm 0.3, 0.7 \pm 0.2	1.2 \pm 0.6, 0.8 \pm 0.2	NS
Epidural analgesic (d, median \pm SD)	3.2 \pm 0.4	3.7 \pm 0.6	0.014 ^a
Use of supplemental analgesic (median \pm SD)	1.2 \pm 1.2	3.8 \pm 2.8	0.039 ^a
Length of drain placement (d, median \pm SD)	3.1 \pm 0.8	4.6 \pm 1.6	0.003 ^a
Length of hospital stay (d, median \pm SD)	11.0 \pm 2.7	12.8 \pm 4.9	NS
Length of hospital stay > 15 d (no. of patients)	0	3 (21, 22, 24 d)	NS
Total in-hospital cost	12,130 \pm 1085	11,492 \pm 1634	NS
Objective symptoms during 4-12 mo after operation			
Keloid†	0	4 (33%)	
Laterality of abdomen	0	1	
Minor suture abscess	1	1	
Alopecia	0	1	



Surgery 2006;139(5):695-703

Prior to the report of Koffron

Laparoscopic-Assisted Right Lobe Donor Hepatectomy

A.J. Koffron^{a,*}, R. Kung^a, T. Baker^a, J. Fryer^a, L. Clark^b and M. Abecassis^a

^aDepartment of Surgery, Feinberg School of Medicine, Northwestern University,

^bNorthwestern Memorial Hospital, Chicago, Illinois, USA

*Corresponding author: A.J. Koffron, akoffron@nmh.org

We describe herein, the first published report of a live donor right hepatectomy utilizing a minimally invasive laparoscopic technique.

Case Report

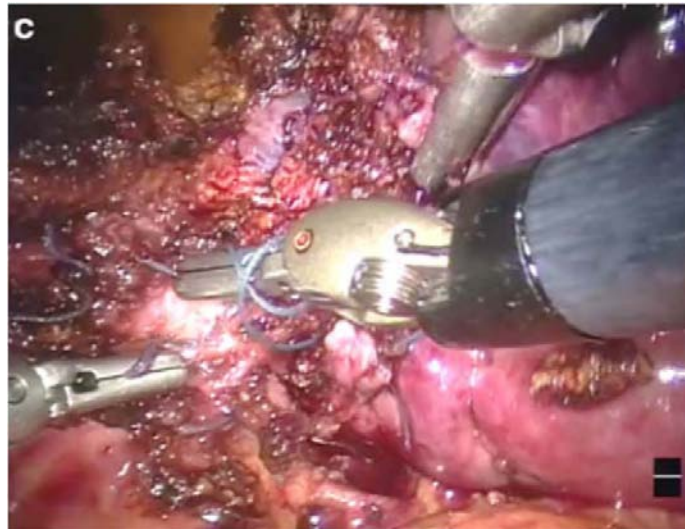
Am J Transpl 2006;6:2522-2525

Go Wakabayashi

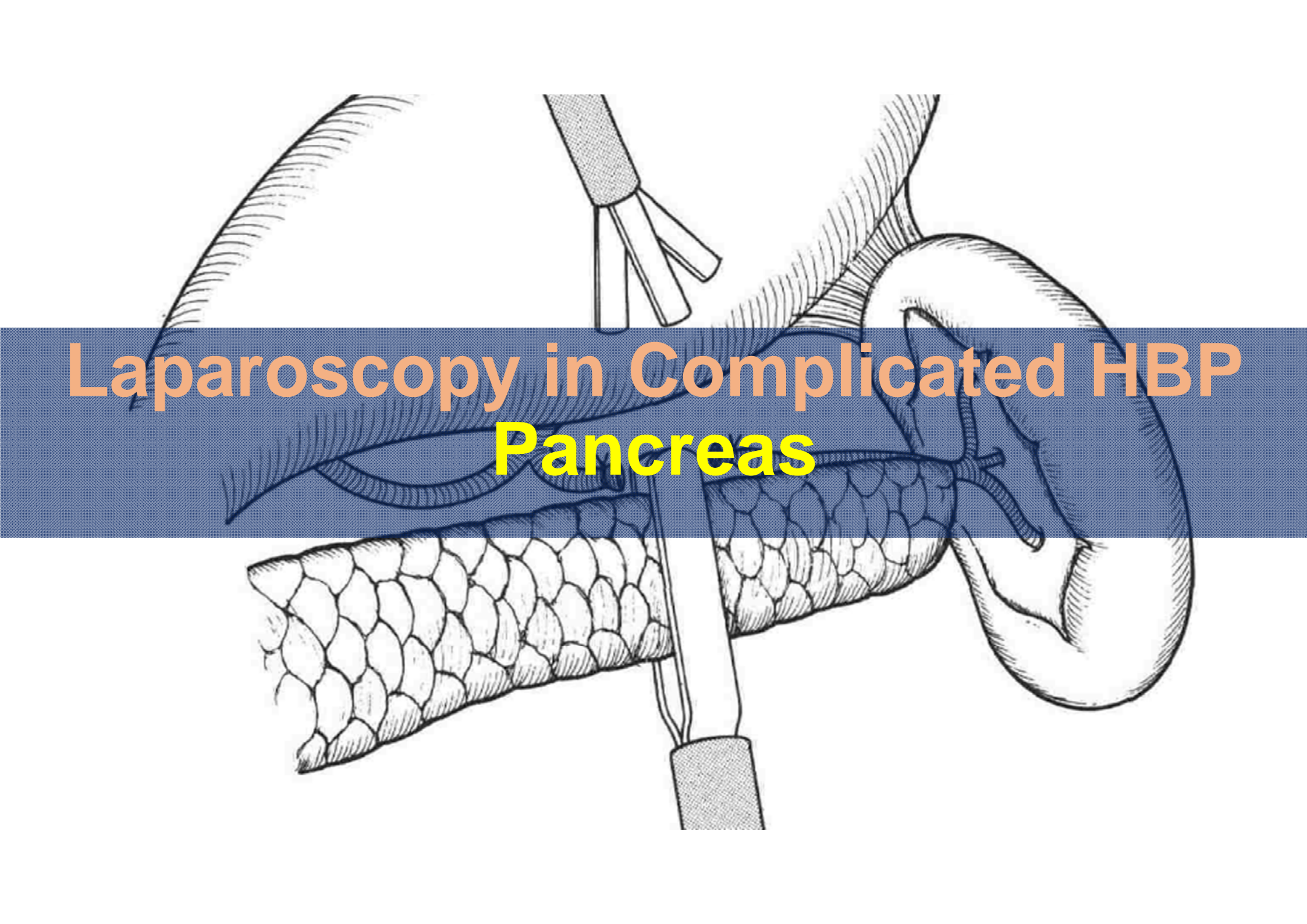


2001/Jul/19 First **robotic** partial hepatectomy

2003/Jun/30 First **robotic** left lateral sectionectomy



Case	Disease	Procedure	Operation time (min)	Blood loss	Complications
1	HCC (S2)	Laparoscopic partial hepatectomy	323	Negligible	No
2	Hemangioma (S3)	Laparoscopic partial hepatectomy	160	Negligible	No
3	HCC (S8)	Thoracoscopic partial hepatectomy	235	Negligible	No
4	HCC (S2)	Laparoscopic lateral sectionectomy	370	Negligible	No



The illustration shows a detailed anatomical view of the pancreas and biliary system. The pancreas is depicted with its characteristic lobulated surface. The biliary tree, including the intrahepatic and extrahepatic ducts, is shown with branching patterns. Two laparoscopic instruments are visible: one at the top center, possibly a grasper or dissector, and another at the bottom center, which appears to be a clip applier or a similar surgical tool. The text 'Laparoscopy in Complicated HBP' is written in orange, and 'Pancreas' is written in yellow, both overlaid on a dark blue horizontal band.

Laparoscopy in Complicated HBP

Pancreas



1992/May/25

First Laparoscopic PD for chronic pancreatitis.

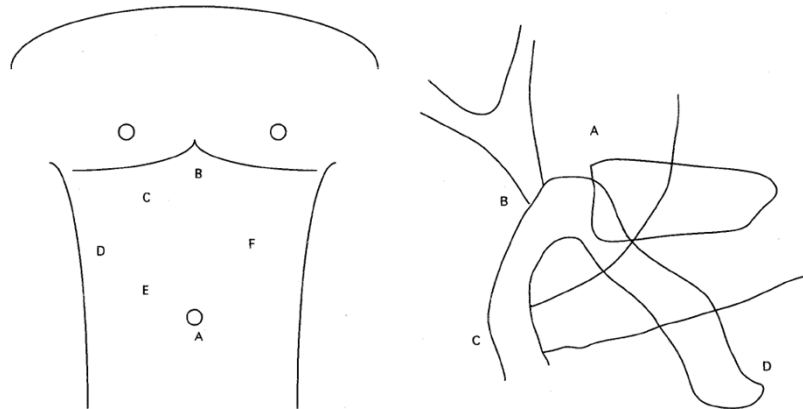
(reported in 1994/May)

Laparoscopic pylorus-preserving pancreatoduodenectomy

M. Gagner, A. Pomp

Department of Surgery, University of Montréal, Hôtel-Dieu de Montréal, 3840 St-Urbain Street, Montréal, Quebec, Canada H2W 1T8

Received: 9 April 1993/Accepted: 9 July 1993



Abstract: A case of chronic pancreatitis localized in the head of the pancreas with pancreas divisum was treated by laparoscopic pylorus-preserving pancreatoduodenectomy. The laparoscopic technique of resection and reconstruction with a gastrojejunostomy, hepaticojejunostomy, and pancreaticojejunostomy is described. The postoperative period was complicated by a jejunal ulcer and delayed gastric emptying necessitating a prolonged hospitalization and intravenous hyperalimentation. No fistulas occurred, a follow-up CT scan revealed no pancreatic abnormalities, and the patient was discharged in good condition on the 30th postoperative day. Although technically feasible, the laparoscopic Whipple procedure may not improve the postoperative outcome or shorten the postoperative recovery period.

Ichiro Uyama



1994/Jul/13 First laparoscopic PD for **cancer**.

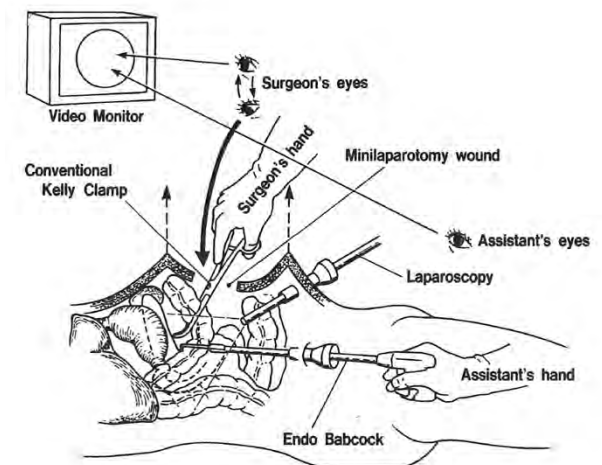
(reported in Japanese; 1996/Apr, in English; 1996/Oct)



Surgical Laparoscopy & Endoscopy
Vol. 6, No. 3, pp. 405-410
© 1996 Lippincott-Raven Publishers, Philadelphia

Brief Clinical Report Laparoscopic Minilaparotomy Pancreaticoduodenectomy with Lymphadenectomy Using an Abdominal Wall-lift Method

Ichiro Uyama, M.D., Hiroyuki Ogiwara, M.D., Shuhei Iida, M.D.,
Tetsuya Takahara, M.D., Tatsuyuki Furuta, M.D., and Kaichiro Kikuchi, M.D.



J Jpn Soc Endosc Surg 1996;1:162-167
Surg Laparosc Endosc 1996;6:405-410

Alfred Cushieri (UK)

1996/Mar First report of laparoscopic distal pancreatectomy.

Ann Surg 1996;223:280-285

Michael Gagner (Canada)

1996/Dec First report of laparoscopic spleen-preserving DP.
(Warshaw procedure)

Surgery 1996;120:1051-1054

1997/Jan First report of laparoscopic DP for malignancy.

J Gastrointest Surg 1997;120:1051-1054

N. Tagaya (Japan)

2002/Jan First report of laparoscopic splenic vessel preserving DP.

Surg Endosc 2002;16:217-218

Conclusion

- Since the 80's, minimally invasive access HBP surgery has continuously evolved from a simple laparoscopic cholecystectomy to more complex pancreatic and liver procedures.
- Numerous pioneering surgeons paved the way for these changes in our present practice but were forgotten along the way.
- It is about time to honor their achievements.