



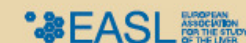
QUALITY IN ENDOSCOPY: ERCP

Ampullectomy - Papillectomy

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EVK

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Guidelines

ASGE

The role of endoscopy in ampullary and duodenal adenomas

GIE 2006

ESGE

Prophylaxis of post-ERCP-pancreatitis
Endoscopy 2010

Ampullary tumors

Adenoma-carcinoma-sequence

Stolte Scand J Gastroenterol 1996

→ complete resection necessary

therapy of ampullary tumors

traditional: surgical therapy

method	mortality	complications	recurrences
transduodenal ampullectomy	0-4%	0-25%	5-30%
pancreatico- duodenectomy	3-5%	25-40%	0%

DeCastro Surgery 2004
Norton GIE 2002
Di Giorgio WJS 2005

Biopsy?

false-negative biopsy: 16-47%

Yamaguchi GIE 1990, De Castro
Surgery 2004, Lee GIE 2006, Irani
GIE 2009, Kim Ann Surg Oncol 2009

- suspicious ampullary lesions should be biopsied before endoscopic resection is attempted
- firmness, ulceration, non-lifting, friability

ASGE guideline GIE 2006

EUS / IDUS?

assessment of

- depth of infiltration
- intraductal extension
- periampullary lymph nodes

EUS / IDUS?

Prospective, histopathologically controlled study

N=40 (30 surgery, 10 ER)

Adenocarcinoma: 33 patients (14 pT1, 11 pT2, 8 pT3-4)

Adenoma: 7 patients

	EUS	IDUS
Accuracy T staging (all patients)		
Adenoma, pT1	62%	86%
pT2	45%	64%
pT3,4	88%	75%
Accuracy T staging (endoscopically treated patients)		
Ductal infiltration diagnosed	80%	100%
	89%	90%

Ito GIE 2007

EUS / IDUS?

EUS / IDUS: tendency of overestimation of ampullary tumors

Ito GIE 2007
Ito Dig Endosc 2011

No agreement on necessity of EUS / IDUS

ASGE guideline GIE 2006

Endoscopic resection - technique

- Submucosal Injection?

Saline solution, epinephrine, methylene blue,
methylcellulose

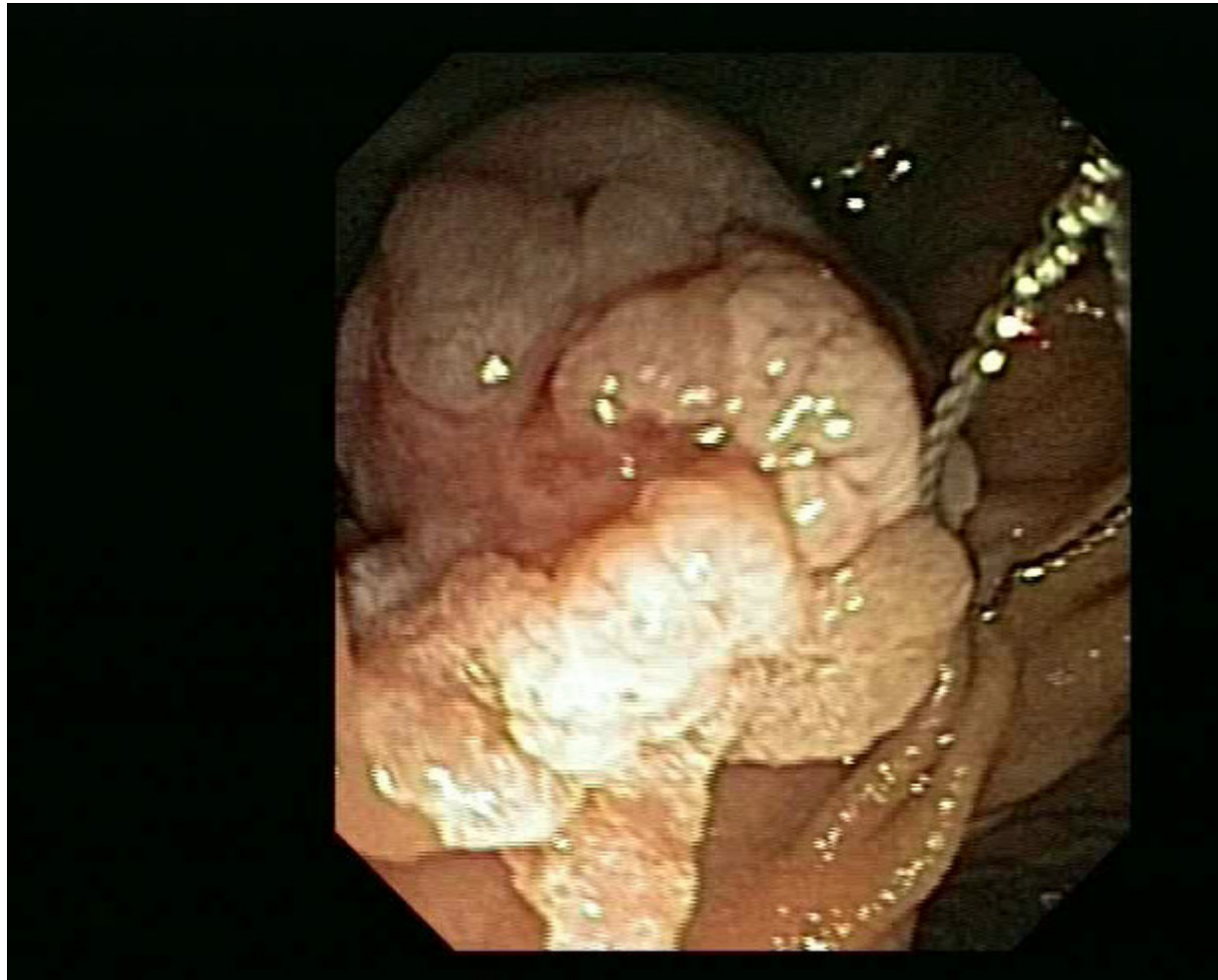
Insufficient data

ASGE guideline GIE 2006

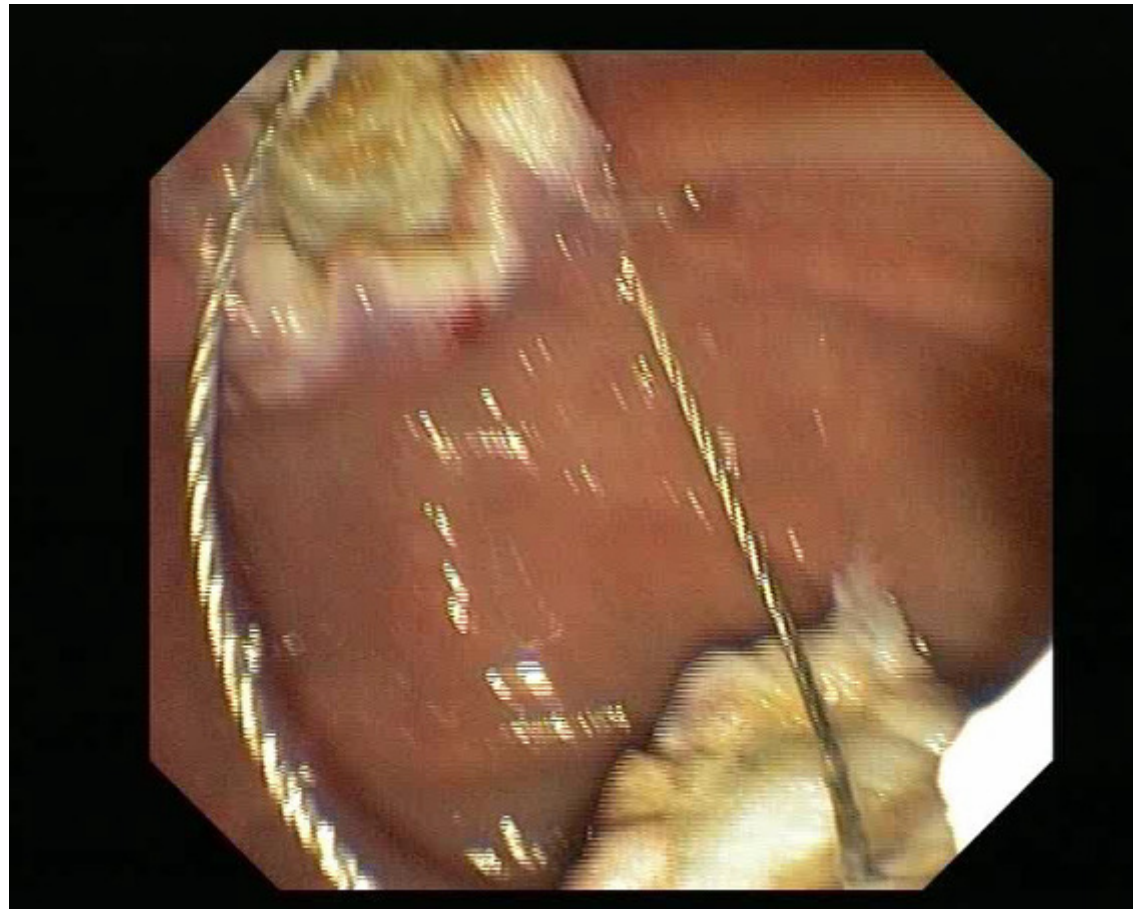
Recommended in laterally spreading / giant tumors

Hopper GIE 2010

Endoscopic resection - technique



Retrieval of the resected specimen



Papillectomy - results

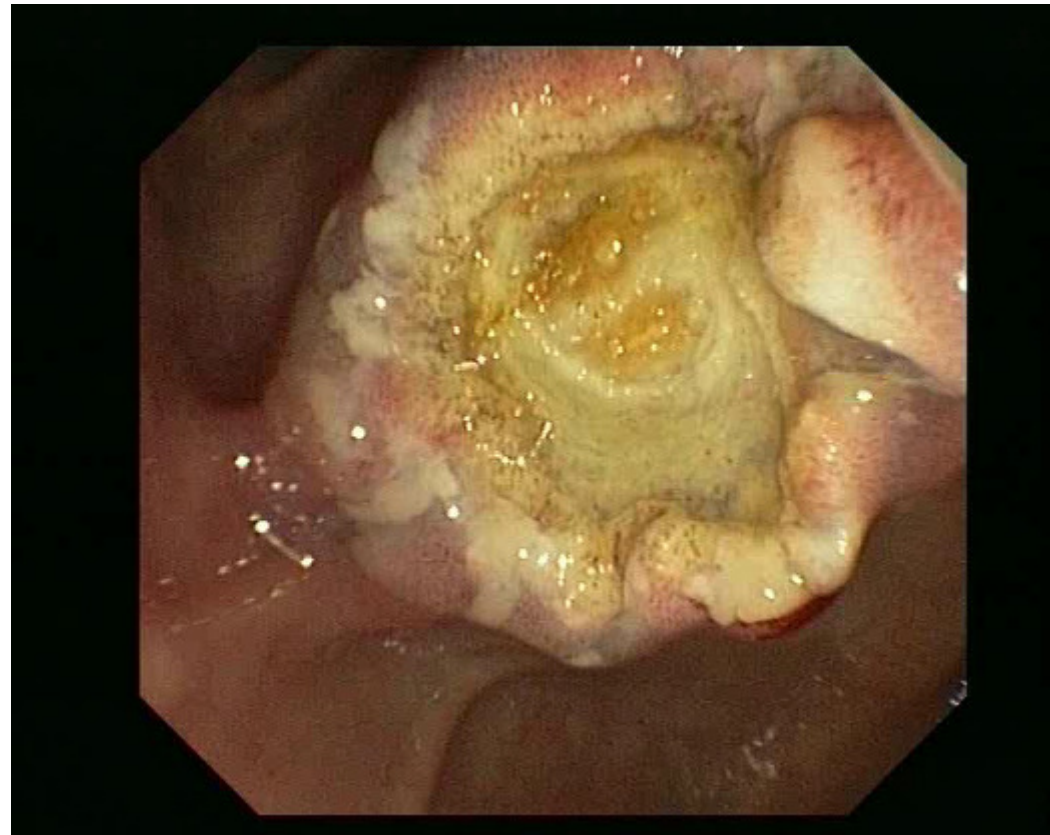
author	n	CA	intraductal	surgery	recurrence
Catalano 2004	103	6%	0	16%	19%
Cheng 2005	55	13%	11%	13%	33%
Bohnacker 2005	106	8%	29%*	19%	15%
Irani 2009	102	8%	n.m.*	16%	8%
all	366	8,5%		16,4%	16.9%

*intraductal max. 1cm

Catalano GIE 2004
Cheng GIE 2004
Bohnacker GIE 2005
Irani GIE 2009

Endoscopic resection and...

- biliary EST
- pancreatic EST
& stenting



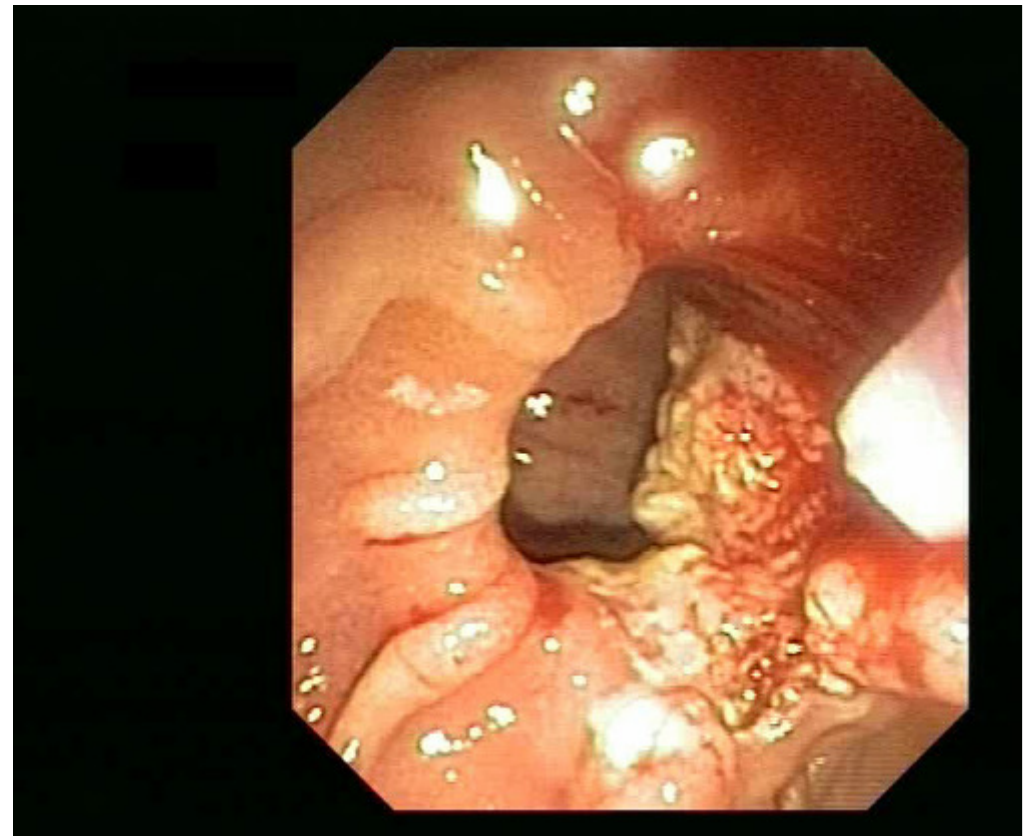
Catalano GIE 2004, Cheng GIE 2004, Bohnacker GIE 2005, Irani GIE 2009, ASGE guideline GIE 2006

Quality in Endoscopy: ERCP, Munich 2011

Complication: bleeding

treated with injection, hot-biopsy forceps and/or clips

author	n	bleeding
Catalano GIE 2004	103	2%
Cheng GIE 2004	55	7%
Bohnacker GIE 2005	106	1%
Irani GIE 2009	102	5%
all	366	3.2%



further complications: perforation, stenosis

author	perforation	stenosis	mortality
Catalano 2004	0%	3%	0%
Cheng 2004	2%	3.6%	0%
Bohnacker 2005	0%	0%	0%
Irani 2009	2%	3%	0%
Hopper 2010	0%	n.m.	0%

Catalano GIE 2004, Cheng GIE
2004, Bohnacker GIE 2005, Irani
GIE 2009

ESGE guideline: prophylaxis of post-ERCP-pancreatitis (PEP)

- The number of cannulation attempts should be minimized
- Number of injections and volume of contrast medium should be kept as low as possible
- Endoscopic papillary balloon dilation: higher incidence of PEP than EST
- Prophylactic pancreatic stent placement (short, 5fr) in high-risk patients

Dumonceau Endoscopy 2010,
Freeman NEJM 1996, Williams Endoscopy 2007, Masci
Endoscopy 2003, Baron AJG 2004, Weinberg Cochrane
database Syst Rev 2006, Andriulli Digestion 2007, Singh
GIE 2004

Quality in Endoscopy: ERCP, Munich 2011

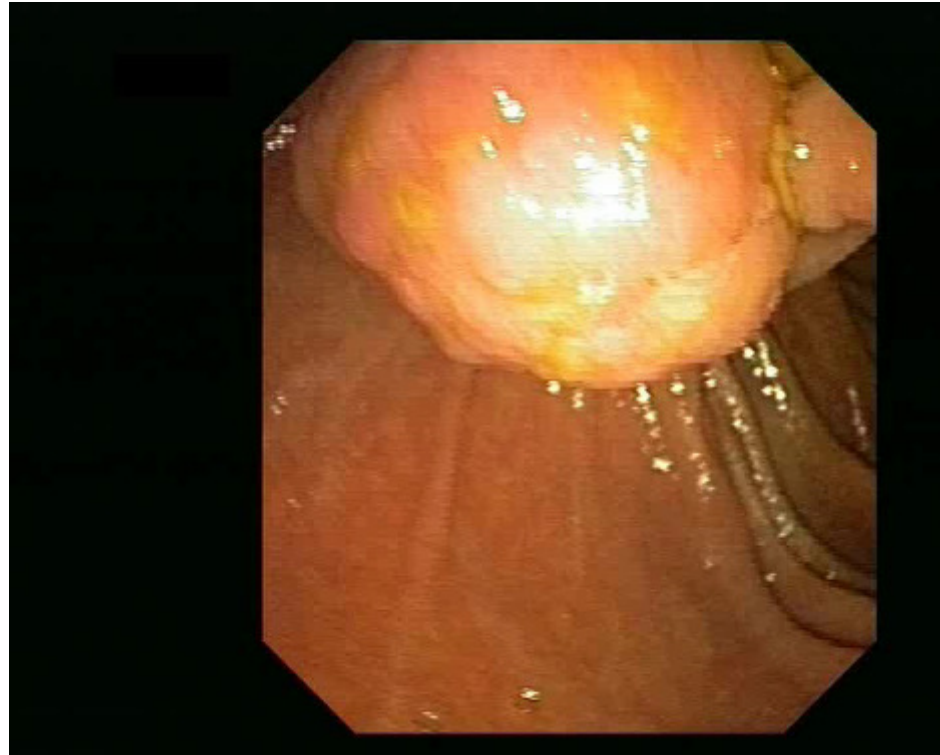
post-ERCP-pancreatitis (PEP) post-papillectomy-pancreatitis

Prophylaxis of PEP: stenting of the pancreatic duct

author	n	pancreatitis stent	pancreatitis no stent	p
Catalano 2004	103	3%	17%	n.m.
Cheng 2004	55	10%	25%	0.33
Bohnacker 2005	106	11%	14%	>0.05
Harewood 2005	19	0%	33%	0.02
Nguyen 2010	36	0%	n.a.	n.a.

Pancreatic duct stenting

any exception for pancreatic stenting?



endoscopic resectability

- intraductal tumor-growth
>10mm: surgical resection



Cheng GIE 2004
Irani GIE 2009

endoscopic resectability

	intraductal	extraductal
patients	31	75
HGIN	11 (35.5%)	7 (9.3%)
endoscopic resection	46%	83% (p<0.05)
recurrence	4 (14%)	11 (15%)
surgery	37%	12%

Bohnacker GIE 2005

HGIN + intraductal tumor growth → surgery

Seewald GIE 2006

ampullary adenomas with HGIN

„Is endoscopic papillectomy safe?“

N=33

Coexistence of cancer in patients with

HGIN (biopsy): 50%

LGIN (biopsy): 15%

Rate of recurrence

HGIN: 80%

Tumor size:

LGIN: 1.27 +/- 0.89cm

HGIN: 1.81 +/- 0.99cm

CA: 1.98 +/- 1.08cm

Tumor size >1,5cm: HGIN/CA (sens. 55%, spec. 80%)

HGIN / papillary cancer

endoscopic and surgical resection specimen

author	n	histology	results	follow-up
Yoon 2007	439 21 18	all HGIN focal pT1*	L0 V0, no LN-met., no recurrence	27 months
Woo 2009	216 5 13	all HGIN pT1 < 2cm**	no LN-Met., 5-y: 100% no LN-Met., no recurrence	36 months

* mucosal, <25% of adenoma

** well-diff., L0 V0

Yoon GIE 2007

Woo J Gastroenterol Hepatol 2009

conclusions

endoscopic resection of papillary adenoma

- safe, definite histology, good results
- criteria of successful endoscopic resection:
 - histology: max. HGIN
 - risk factor: intraductal extension
 - tumor size: „no limit“
- recurrences: endoscopic follow-up necessary
- complications: endoscopic / conservative management