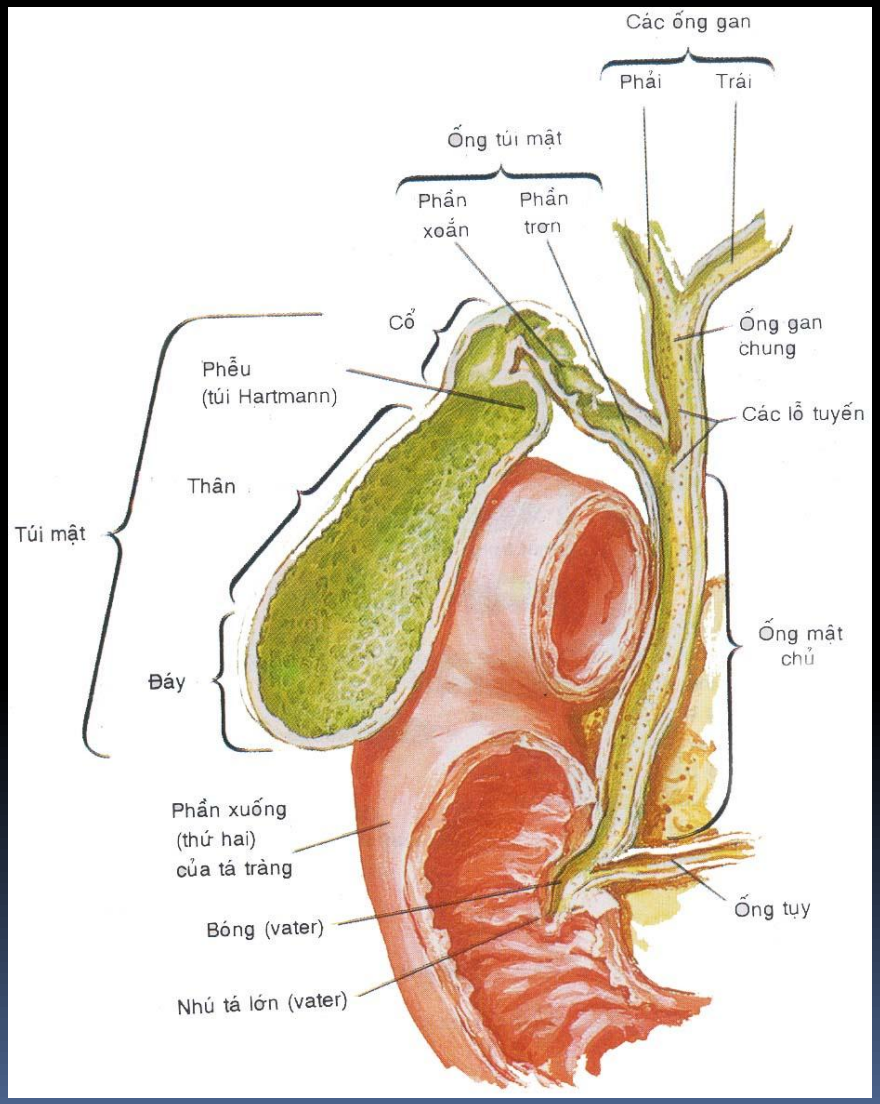
Đại Học Y Dược Thành phố Hồ Chí Minh

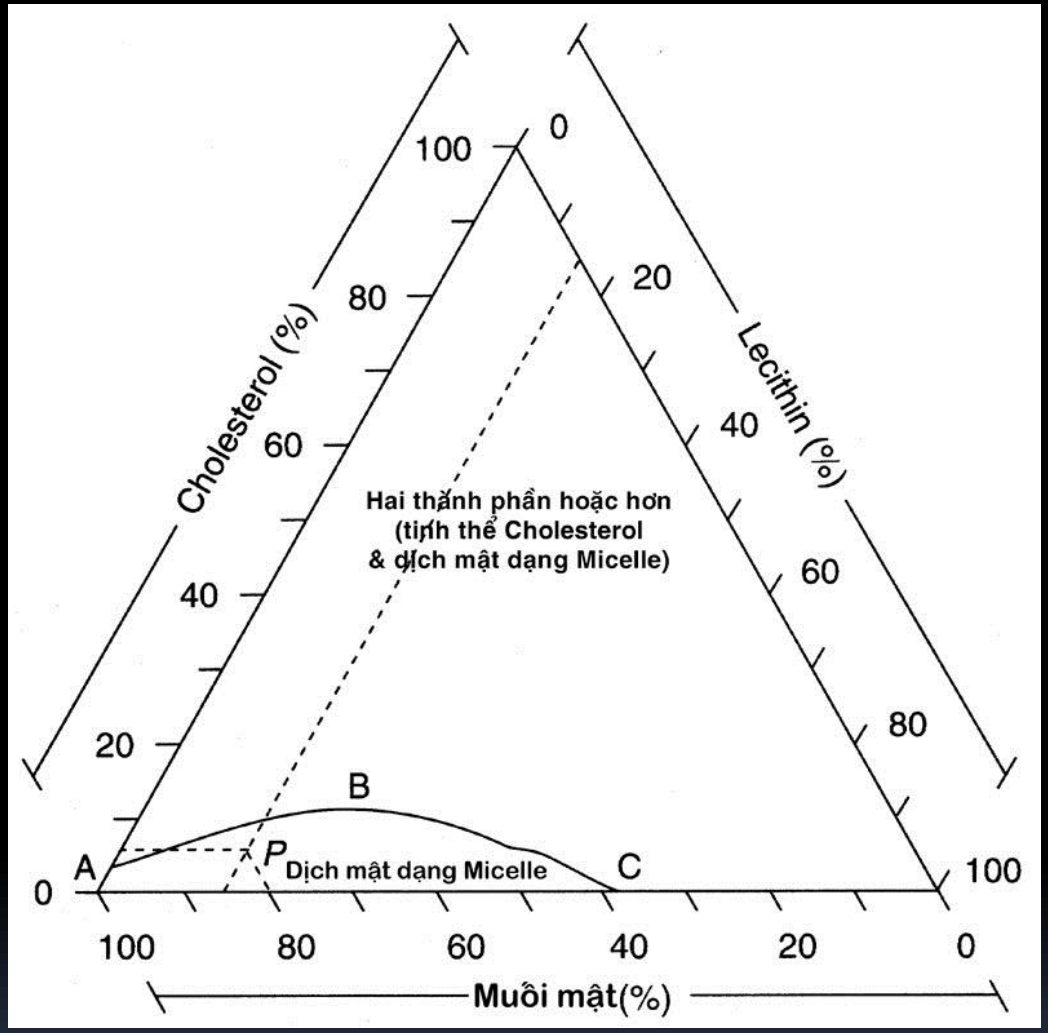
SỎI TÚI MẬT

Giảng viên : **Vũ Quang Hưng**

GIẢI PHẪU – SINH LÝ



TAM GIAÙC SMALL (hình thaønh soûi tuùi maät)



CHẨN ĐOÁN

I. SIÊU ÂM BỤNG

1/ NGUYÊN TẮC

- Sóng siêu âm

2/ ƯU ĐIỂM

- Nhanh.
- Không xâm lấn.
- Sẵn có, dễ thực hiện.
- Giá thành thấp.
- An toàn cho phụ nữ có thai.

3/ KHUYẾT ĐIỂM

- Độ phân giải không cao.
- Chủ quan: phụ thuộc người thực hiện.

4/ ĐẶC ĐIỂM

- Echo dày.
- Có bóng lưng.
- Di động.

Sỏi túi mật

II. CT SCAN BỤNG

1/ NGUYÊN TẮC

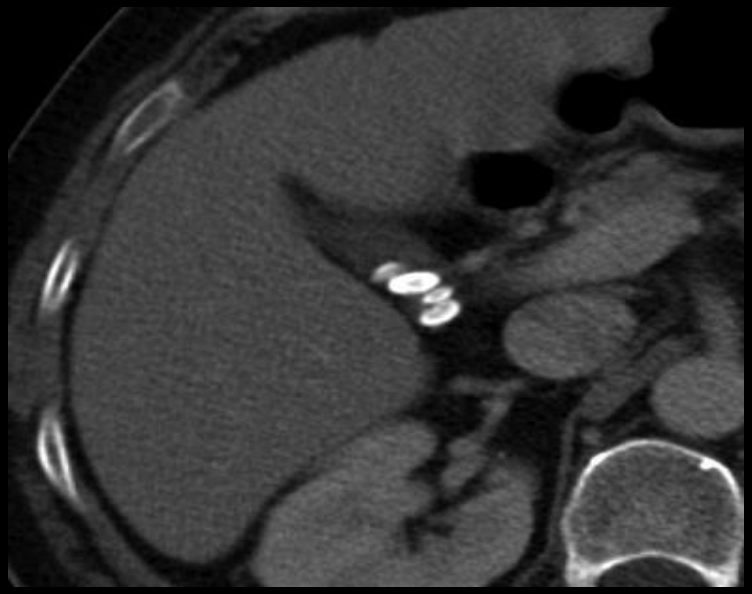
- Tia X

2/ ƯU ĐIỂM

- Khách quan.
- Không xâm lấn.
- Độ phân giải cao.

3/ KHUYẾT ĐIỂM

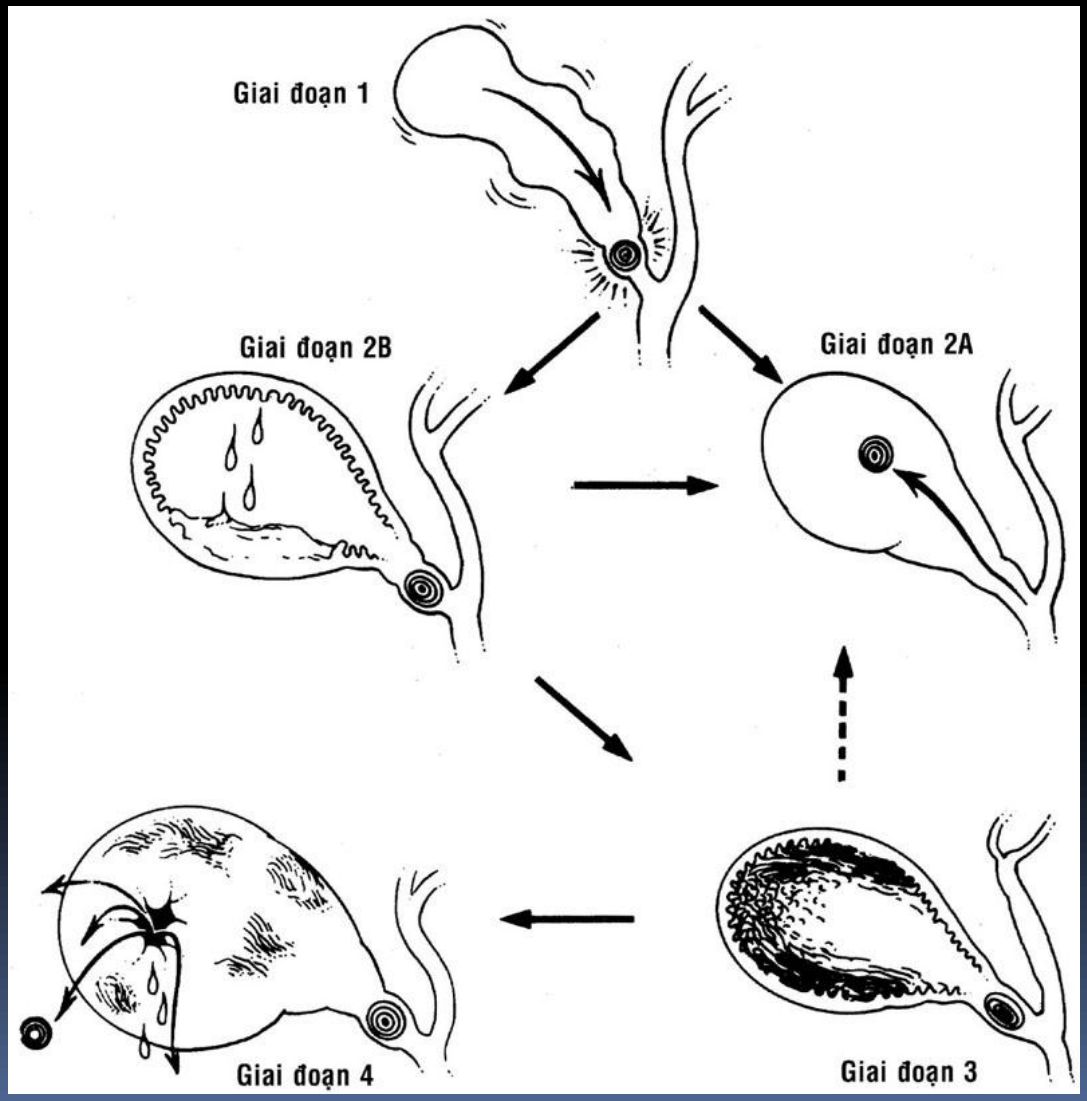
- Hình ảnh không rõ khi có kim loại gần vùng cần khảo sát.
- Không sẵn có.
- Giá thành cao.
- Không dùng cho phụ nữ có thai.



Sỏi túi mật

VIÊM TÚI MẬT CẤP

CÁC GIAI ĐOẠN VIÊM TÚI MẬT CẤP



TRIỆU CHỨNG LÂM SÀNG

Giai ñoaïn 1 Sỏi kẹt cổ tuùi maät

- Ñau thöôïng vị töøng cơn + oùi

Giai ñoaïn 2 Tuùi maät viêm caáp

- Soát

- Ñeà khaùng thaønh buïng, Murphy (+)

Giai ñoaïn 3 Tuùi maät viêm muû hoaëc hoaïi töû, chöa thuûng

- Nhiễm truøng, nhiễm ñoäc.

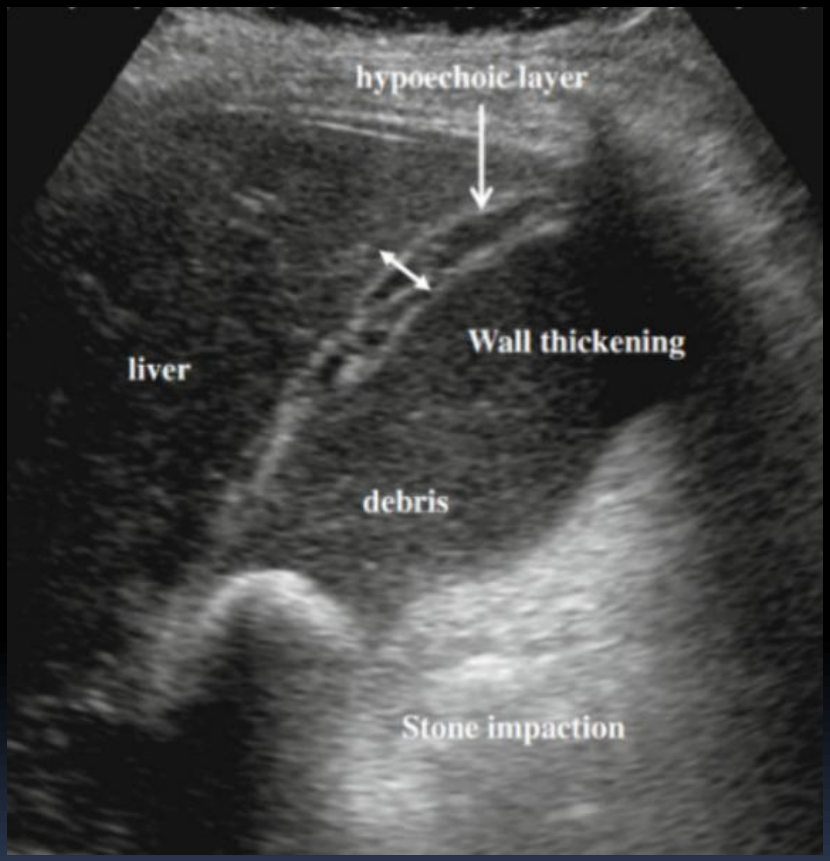
- Ñeà khaùng thaønh buïng

Giai ñoaïn 4 Tuùi maät viêm hoaïi töû, thuûng (48-72 giøø)

CẬN LÂM SÀNG

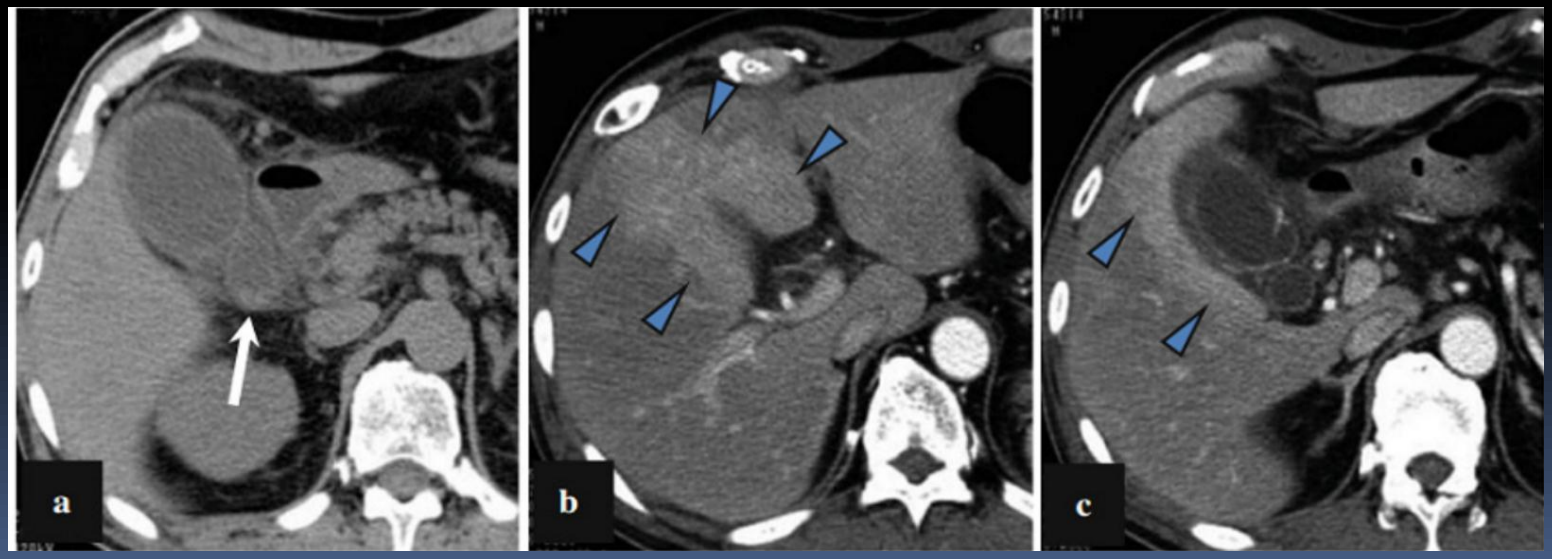
I. SIÊU ÂM BỤNG

- Vách túi mật dày > 3mm
- Dịch quanh túi mật
- Dấu Murphy echo (+)
- Túi mật mất liên tục.



II. CT SCAN BỤNG

- Vách túi mật dày > 3mm
- Dịch quanh túi mật
- Thành túi mật bắt thuốc cản quang không đều hoặc mất liên tục thành túi mật: viêm túi mật hoại tử



	Độ nhạy	Độ đặc hiệu
Siêu âm	95 – 99 %	88 – 100 %
CT scan	78,5 %	97,6 %

III. SINH HÓA MÁU

- Bạch cầu > 10 K/uL hoặc < 4K/uL.
- CRP > 1mg/dL

CHẨN ĐOÁN VIÊM TÚI MẬT CẤP: TOKYO GUIDELINE 2013

A. Local signs of inflammation etc.

(1) Murphy's sign, (2) RUQ mass/pain/tenderness

B. Systemic signs of inflammation etc.

(1) Fever, (2) elevated CRP, (3) elevated WBC count

C. Imaging findings

Imaging findings characteristic of acute cholecystitis

Suspected diagnosis: One item in A + one item in B

Definite diagnosis: One item in A + one item in B + C

Acute hepatitis, other acute abdominal diseases, and chronic cholecystitis should be excluded

RUQ right upper abdominal quadrant, *CRP* C-reactive protein, *WBC* white blood cell

Grade III (severe) acute cholecystitis

Associated with dysfunction of any one of the following organs/systems:

1. Cardiovascular dysfunction	Hypotension requiring treatment with dopamine ≥5 μg/kg per min, or any dose of norepinephrine
2. Neurological dysfunction	Decreased level of consciousness
3. Respiratory dysfunction	PaO_2/FiO_2 ratio <300
4. Renal dysfunction	Oliguria, creatinine >2.0 mg/dl
5. Hepatic dysfunction	PT-INR >1.5
6. Hematological dysfunction	Platelet count <100,000/mm^3

Grade II (moderate) acute cholecystitis

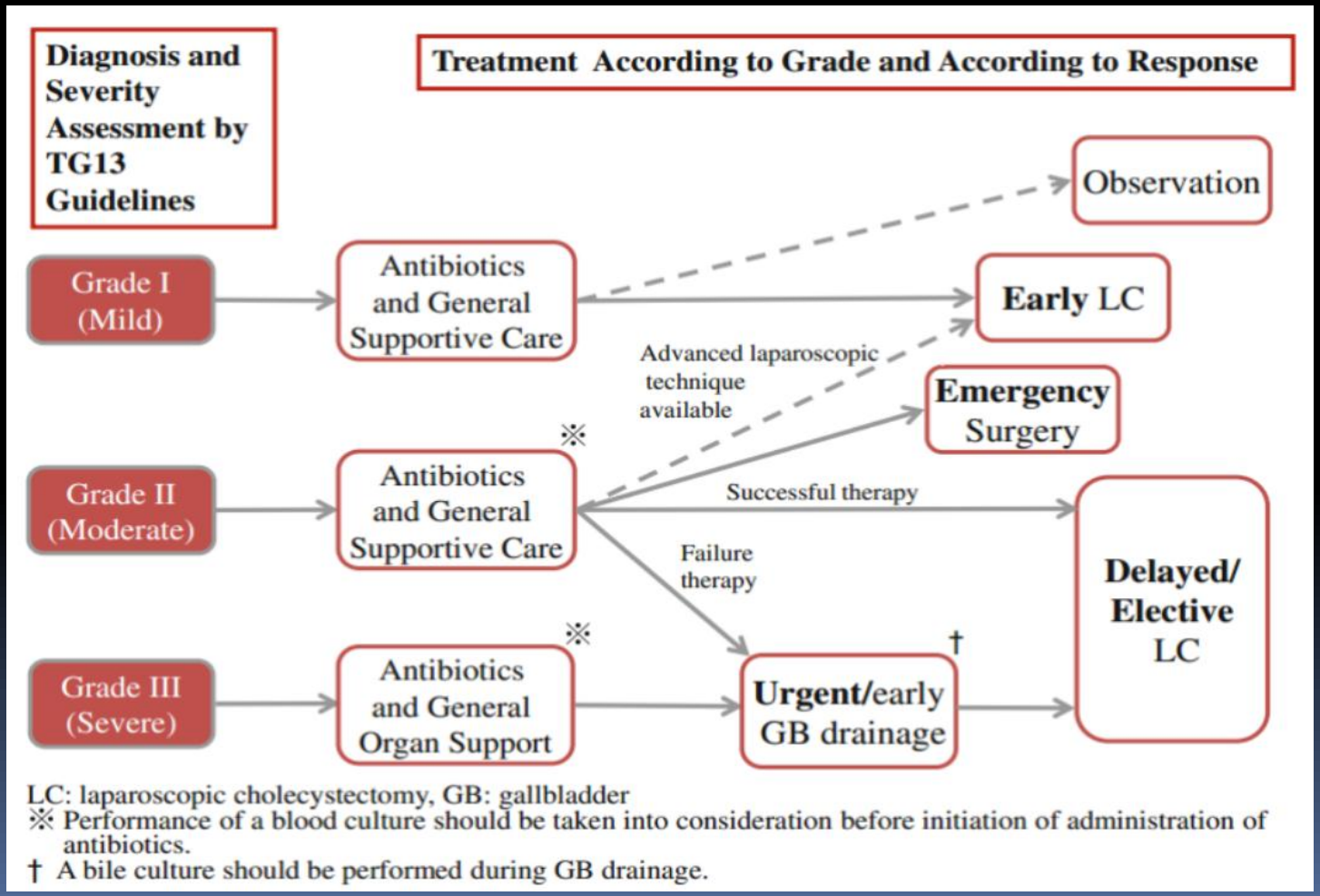
Associated with any one of the following conditions:

1. Elevated white blood cell count (>18,000/mm^3)
2. Palpable tender mass in the right upper abdominal quadrant
3. Duration of complaints >72 h
4. Marked local inflammation (gangrenous cholecystitis, pericholecystic abscess, hepatic abscess, biliary peritonitis, emphysematous cholecystitis)

Grade I (mild) acute cholecystitis

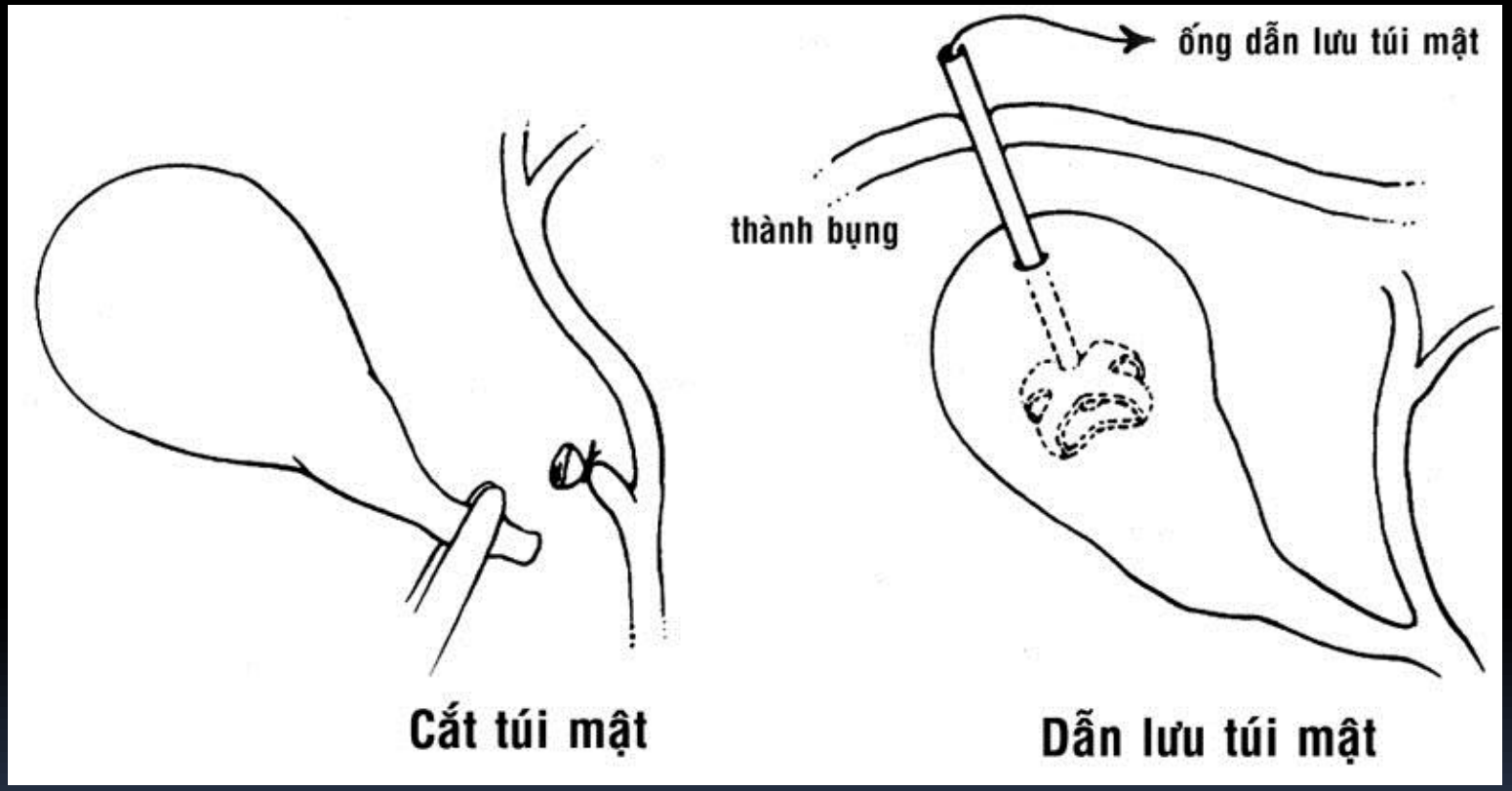
Does not meet the criteria of "Grade III" or "Grade II" acute cholecystitis. Grade I can also be defined as acute cholecystitis in a healthy patient with no organ dysfunction and mild inflammatory changes in the gallbladder, making cholecystectomy a safe and low-risk operative procedure

ĐIỀU TRỊ VIÊM TÚI MẬT CẤP: TOKYO GUIDELINE 2013

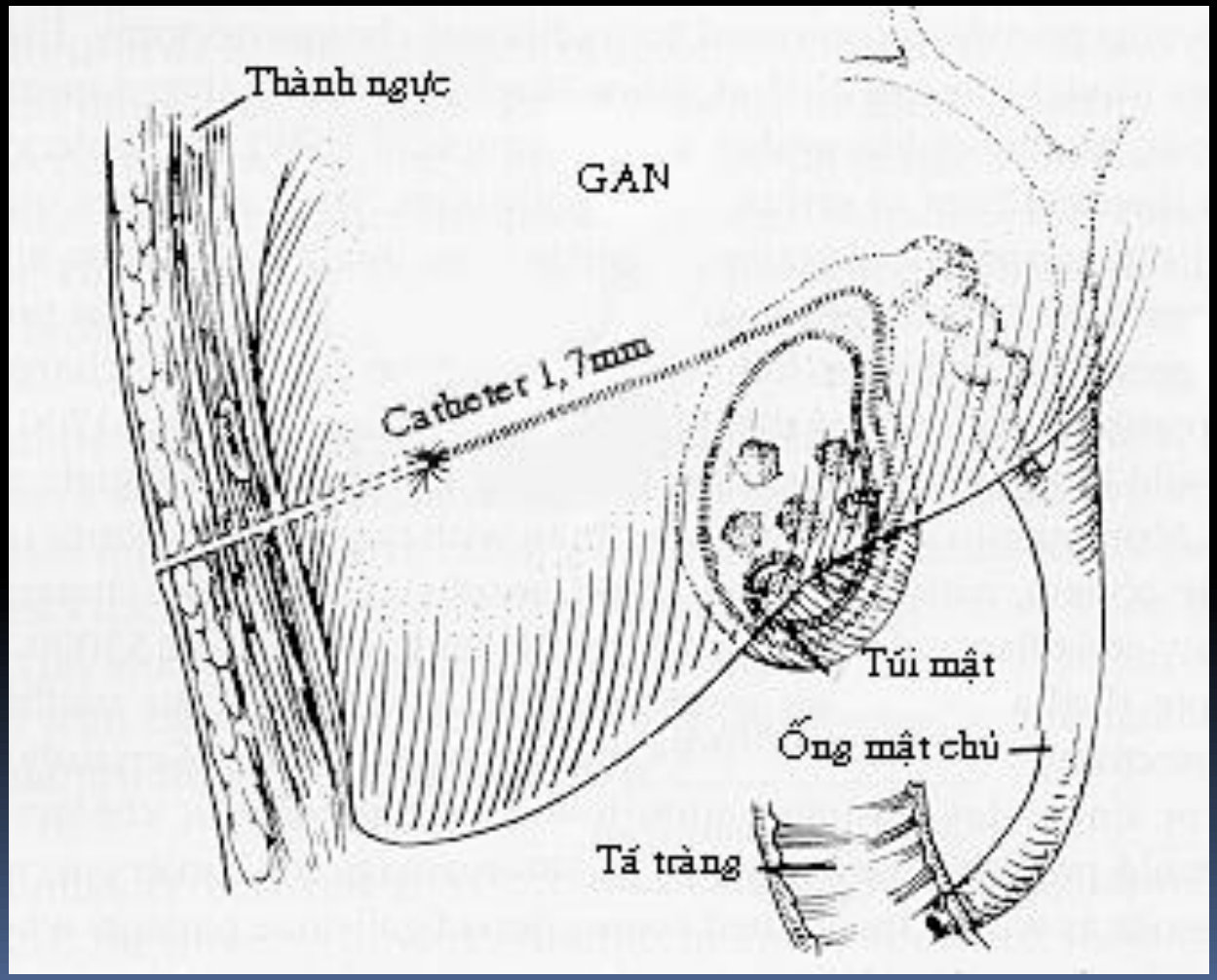


LC: laparoscopic cholecystectomy, GB: gallbladder
※ Performance of a blood culture should be taken into consideration before initiation of administration of antibiotics.
† A bile culture should be performed during GB drainage.

PHẪU THUẬT



DẪN LƯU TÚI MẬT XUYÊN GAN QUA DA



SỎI ỐNG MẬT CHỦ

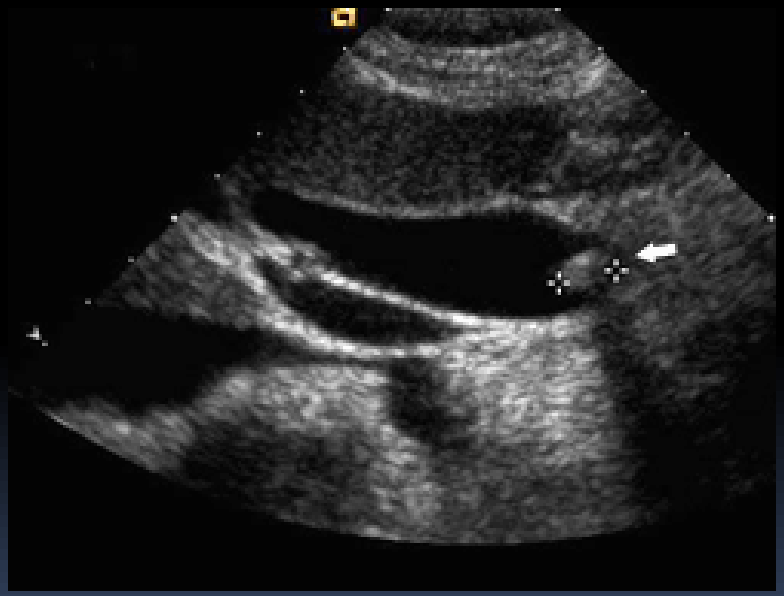
TRIỆU CHỨNG LÂM SÀNG

- ĐAU BỤNG THƯỢNG VỊ HOẶC DƯỚI SƯỜN PHẢI
- SỐT
- VÀNG DA

CẬN LÂM SÀNG

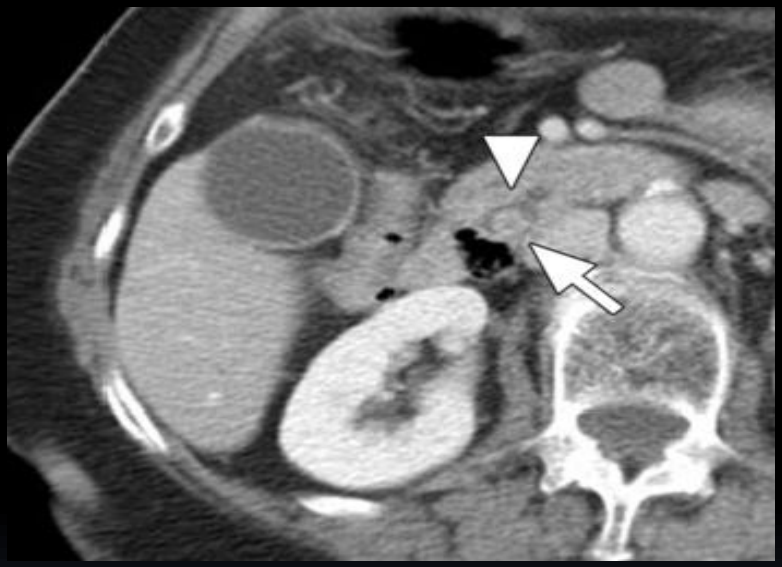
I. HÌNH ẢNH HỌC

1. SIÊU ÂM BỤNG



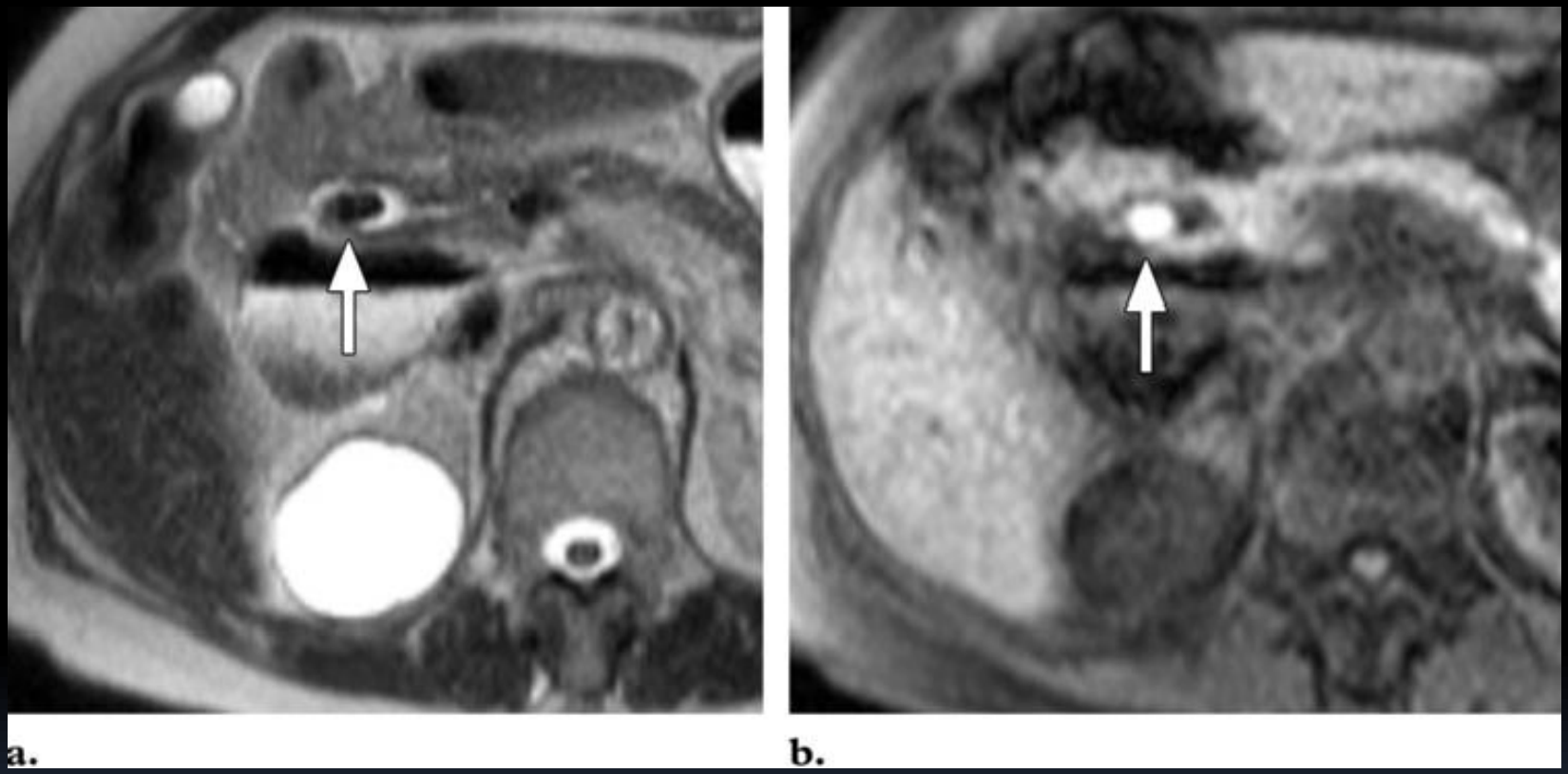
Siêu âm bụng

2. CT SCAN BỤNG



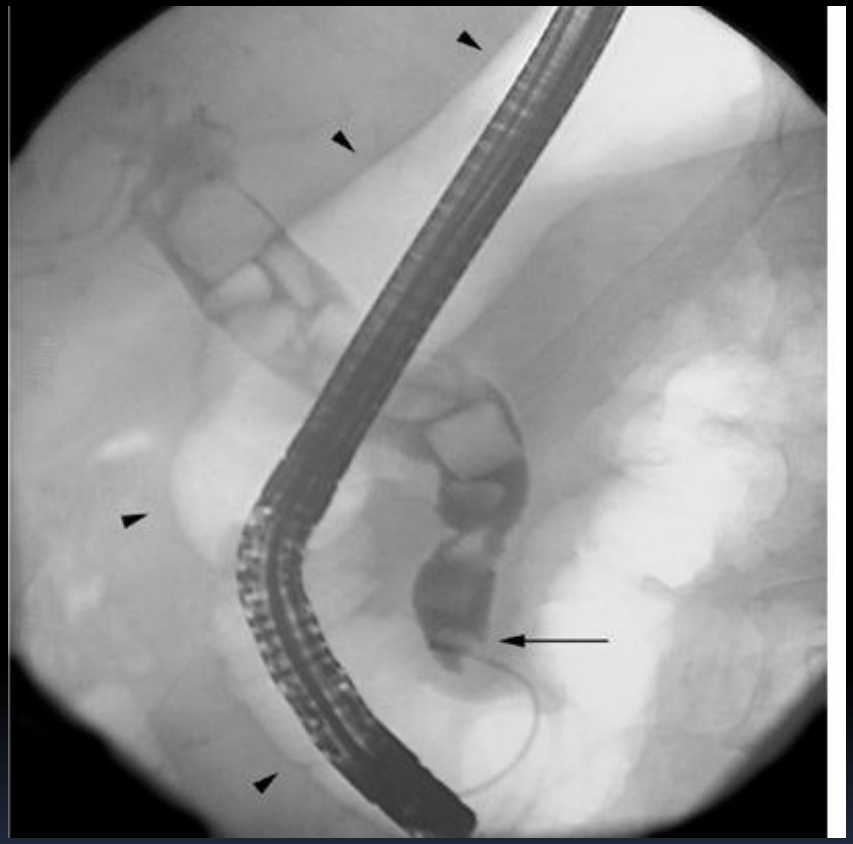
CT Scan

3. MRCP



MRCP

4. ERCP



ERCP

5. X QUANG ĐƯỜNG MẬT TRONG MỔ

X quang đường mật trong mổ

	Độ nhạy	Độ đặc hiệu	Ưu điểm	Khuyết điểm
SIÊU ÂM	**50 – 80 %**	**95 %**		- Giới hạn do hơi đường ruột. - Khó phát hiện sỏi khi ĐM không dãn hay dãn ít. - Không tái tạo giải phẫu đường mật
CT SCAN - Không cản quang - Có cản quang	**80 – 88 %** **85 – 96 %**	**97 – 100 %** **88 – 98 %**	- Không giới hạn do hơi. - Phát hiện sỏi ngay khi ĐM không dãn	- Khó phát hiện sỏi cùng đậm độ dịch mật (sỏi cholesterol). - Không tái tạo giải phẫu đường mật (trừ CT xoắn ốc)

	Độ nhạy	Độ đặc hiệu	Ưu điểm	Khuyết điểm
MRCP	**94 %**	**99 %**	-Tương tự CT SCAN - Tái tạo giải phẫu đường mật. -Thấy phần đường mật phía sau tắc nghẽn.	
ERCP	**90 %**	**98 %**	-Tương tự MRCP.	- Không thấy phần đường mật phía sau tắc nghẽn.

	Độ nhạy	Độ đặc hiệu	Ưu điểm	Khuyết điểm
X quang đường mật trong mổ	**80 – 90 %**	**76 - 97 %**	-Tương tự ERCP	- Tương tự ERCP
Siêu âm trong mổ	**92,86 %**	**# 100 %**	- Không giới hạn do hơi - Phát hiện sỏi ngay khi đường mật không dãn	- Không tái tạo giải phẫu đường mật

CHẨN ĐOÁN VIÊM ĐƯỜNG MẬT CẤP: TOKYO GUIDELINE 2013

A. Systemic inflammation

A-1. Fever and/or shaking chills

A-2. Laboratory data: evidence of inflammatory response

B. Cholestasis

B-1. Jaundice

B-2. Laboratory data: abnormal liver function tests

C. Imaging

C-1. Biliary dilatation

C-2. Evidence of the etiology on imaging (stricture, stone, stent etc.)

Suspected diagnosis: One item in A + one item in either B or C

Definite diagnosis: One item in A, one item in B and one item in C

Note:

A-2: Abnormal white blood cell counts, increase of serum C-reactive protein levels, and other changes indicating inflammation

B-2: Increased serum ALP, γGTP (GGT), AST and ALT levels.

Other factors which are helpful in diagnosis of acute cholangitis include abdominal pain [right upper quadrant (RUQ) or upper abdominal] and a history of biliary disease such as gallstones, previous biliary procedures, and placement of a biliary stent.

In acute hepatitis, marked systematic inflammatory response is observed infrequently. Virological and serological tests are required when differential diagnosis is difficult.

Thresholds

A-1	Fever		BT >38 °C
A-2	Evidence of inflammatory response	WBC (×1000/μL)	<4, or >10
		CRP (mg/dl)	≥1
B-1	Jaundice		T-Bil ≥2 (mg/dL)
B-2	Abnormal liver function tests	ALP (IU)	>1.5 × STD
		γGTP (IU)	>1.5 × STD
		AST (IU)	>1.5 × STD
		ALT (IU)	>1.5 × STD

Grade III (Severe) acute cholangitis

"Grade III" acute cholangitis is defined as acute cholangitis that is associated with the onset of dysfunction in at least one of any of the following organs/systems:

1. Cardiovascular dysfunction	Hypotension requiring dopamine ≥5 μg/kg per min, or any dose of norepinephrine
2. Neurological dysfunction	Disturbance of consciousness
3. Respiratory dysfunction	PaO_2/FiO_2 ratio <300
4. Renal dysfunction	Oliguria, serum creatinine >2.0 mg/dl
5. Hepatic dysfunction	PT-INR >1.5
6. Hematological dysfunction	Platelet count <100,000/mm^3

Grade II (moderate) acute cholangitis

"Grade II" acute cholangitis is associated with any two of the following conditions:

1. Abnormal WBC count (>12,000/mm^3, <4,000/mm^3)
2. High fever (≥39 °C)
3. Age (≥75 years old)
4. Hyperbilirubinemia (total bilirubin ≥5 mg/dL)
5. Hypoalbuminemia (<STD × 0.7)

Grade I (mild) acute cholangitis

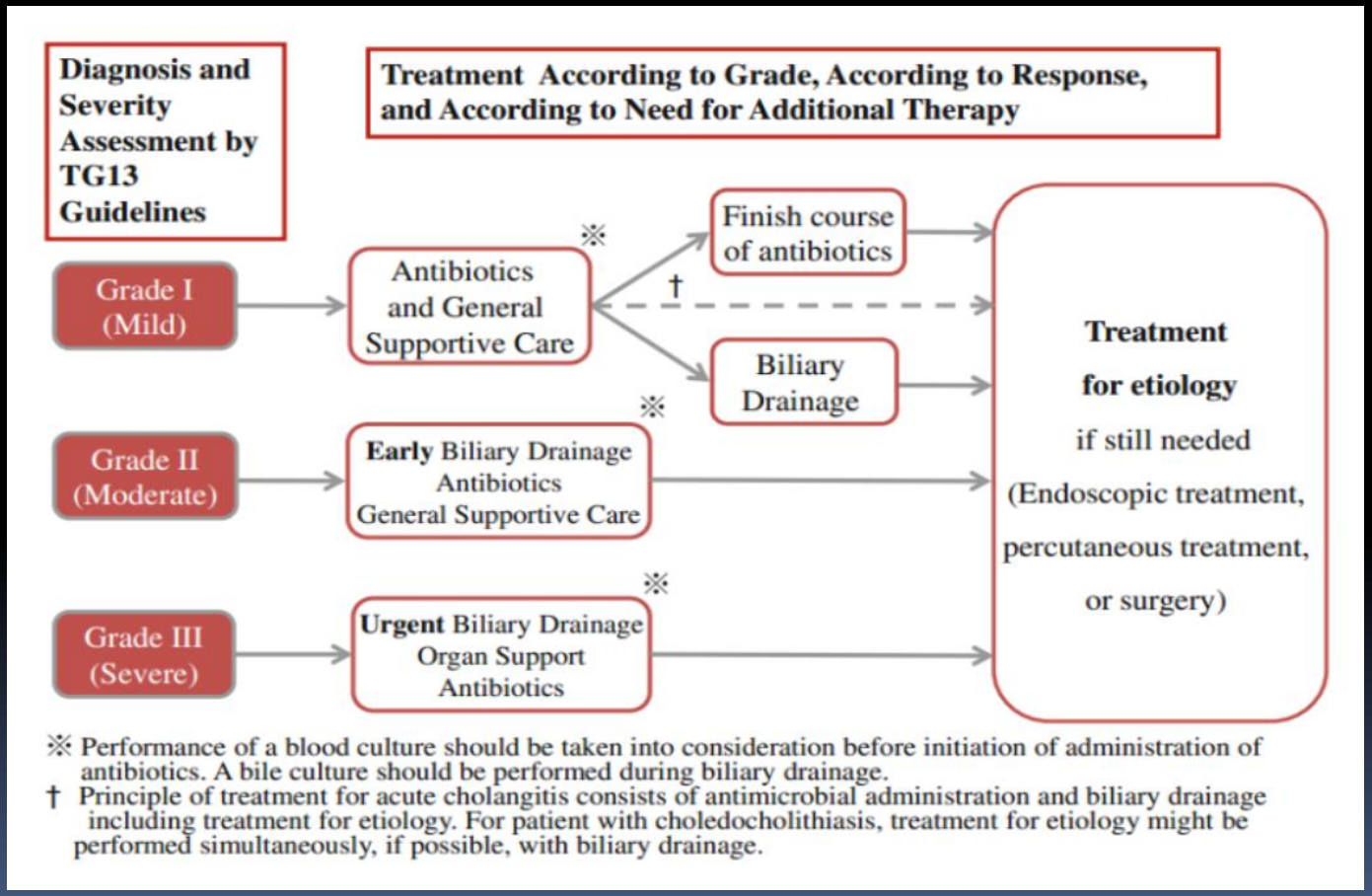
"Grade I" acute cholangitis does not meet the criteria of "Grade III (severe)" or "Grade II (moderate)" acute cholangitis at initial diagnosis.

Notes

Early diagnosis, early biliary drainage and/or treatment for etiology, and antimicrobial administration are fundamental treatments for acute cholangitis classified not only as Grade III (severe) and Grade II (moderate) but also Grade I (mild).

Therefore, it is recommended that patients with acute cholangitis who do not respond to the initial medical treatment (general supportive care and antimicrobial therapy) undergo early biliary drainage or treatment for etiology (see flowchart).

ĐIỀU TRỊ VIÊM ĐƯỜNG MẬT CẤP: TOKYO GUIDELINE 2013



1. When acute cholangitis is suspected, diagnostic assessment is made using TG13 diagnostic criteria every 6–12 h
2. Abdominal X-ray (KUB) and abdominal US are carried out, followed by CT scan, MRI, MRCP and HIDA scan
3. Severity is repeatedly assessed using severity assessment criteria; at diagnosis, within 24 h after diagnosis, and during the time zone of 24–48 h
4. As soon as a diagnosis has been made, the initial treatment is provided. The treatment is as follows: sufficient fluids replacement, electrolyte compensation, and intravenous administration of analgesics and full dose of antimicrobial agents are provided
5. For patients with Grade I (mild), when no response to the initial treatment is observed within 24 h, biliary tract drainage is carried out immediately
6. For patients with Grade II (moderate), biliary tract drainage is immediately performed along with the initial treatment. If early drainage cannot be performed due to the lack of facilities or skilled personnel, transfer of the patient is considered
7. For patients with Grade III (severe), urgent biliary tract drainage is performed along with the initial treatment and general supportive care. If urgent drainage cannot be performed due to the lack of facilities or skilled personnel, transfer of the patient is considered
8. For patient with Grade III (severe), organ supports (noninvasive/invasive positive pressure ventilation, use of vasopressors and antimicrobial agents, etc.) are immediately performed
9. Blood culture and/or bile culture is performed for Grade II (moderate) and III (severe) patients
10. Treatment for etiology of acute cholangitis with endoscopic, percutaneous, or operative intervention is considered once acute illness has resolved. Cholecystectomy should be performed for cholecystolithiasis after acute cholangitis has resolved

KUB kidney–ureter–bladder, *US* ultrasonography, *CT* computed tomography, *MRI* magnetic resonance imaging, *MRCP* magnetic resonance cholangiopancreatography, *HIDA* hepatobiliary iminodiacetic acid

KHÁNG SINH TRONG ĐIỀU TRỊ VIÊM ĐƯỜNG MẬT CẤP, VIÊM TÚI MẬT CẤP: TOKYO GUIDELINE 2013

	Community-acquired biliary infections				Healthcare-associated biliary infections
Severity	Grade I		Grade II	Grade III	
Diagnosis	Cholecystitis	Cholangitis	Cholangitis and cholecystitis	Cholangitis and cholecystitis	Healthcare-associated cholangitis and cholecystitis
Duration of therapy	Antimicrobial therapy can be discontinued within 24 h after cholecystectomy is performed	Once source of infection is controlled, duration of 4–7 days is recommended If bacteremia with Gram-positive cocci such as *Enterococcus* spp., *Streptococcus* spp. is present, minimum duration of 2 weeks is recommended			If bacteremia with Gram-positive cocci such as *Enterococcus* spp., *Streptococcus* spp. is present, minimum duration of 2 weeks is recommended
Specific conditions for extended therapy	If perforation, emphysematous changes, and necrosis of gallbladder are noted during cholecystectomy, duration of 4–7 days is recommended	If residual stones or obstruction of the bile tract are present, treatment should be continued until these anatomical problems are resolved			

	Community-acquired biliary infections				Healthcare-associated biliary infections[e]
Severity	Grade I		Grade II	Grade III[e]	
Antimicrobial agents	Cholangitis	Cholecystitis	Cholangitis and cholecystitis	Cholangitis and cholecystitis	Healthcare-associated cholangitis and cholecystitis
Penicillin-based therapy	Ampicillin/sulbactam[b] is not recommended without an aminoglycoside	Ampicillin/sulbactam[b] is not recommended without an aminoglycoside	Piperacillin/tazobactam	Piperacillin/tazobactam	Piperacillin/tazobactam
Cephalosporin-based therapy	Cefazolin[a], or cefotiam[a], or cefuroxime[a], or ceftriaxone, or cefotaxime ± metronidazole[d]	Cefazolin[a], or cefotiam[a], or cefuroxime[a], or ceftriaxone, or cefotaxime ± metronidazole[d]	Ceftriaxone, or cefotaxime, or cefepime, or cefozopran, or ceftazidime ± metronidazole[d]	Cefepime, or ceftazidime, or cefozopran ± metronidazole[d]	Cefepime, or ceftazidime, or cefozopran ± metronidazole[d]
	Cefmetazole,[a] Cefoxitin,[a] Flomoxef,[a] Cefoperazone/sulbactam	Cefmetazole,[a] Cefoxitin,[a] Flomoxef,[a] Cefoperazone/sulbactam	Cefoperazone/sulbactam		
Carbapenem-based therapy	Ertapenem	Ertapenem	Ertapenem	Imipenem/cilastatin, meropenem, doripenem, ertapenem	Imipenem/cilastatin, meropenem, doripenem, ertapenem
Monobactam-based therapy	–	–	–	Aztreonam ± metronidazole[c]	Aztreonam ± metronidazole[d]
Fluoroquinolone-based therapy[c]	Ciprofloxacin, or levofloxacin, or pazufloxacin ± metronidazole[d]	Ciprofloxacin, or levofloxacin, or pazufloxacin ± metronidazole[d]	Ciprofloxacin, or levofloxacin, or pazufloxacin ± metronidazole[c]	–	–
	Moxifloxacin	Moxifloxacin	Moxifloxacin		

[a] Local antimicrobial susceptibility patterns (antibiogram) should be considered for use

[b] Ampicillin/sulbactam has little activity left against *Escherichia coli*. It is removed from the North American guidelines [6]

[c] Fluoroquinolone use is recommended if the susceptibility of cultured isolates is known or for patients with β-lactam allergies. Many extended-spectrum β-lactamase (ESBL)-producing Gram-negative isolates are fluoroquinolone-resistant

[d] Anti-anaerobic therapy, including use of metronidazole, tinidazole, or clindamycin, is warranted if a biliary-enteric anastomosis is present. The carbapenems, piperacillin/tazobactam, ampicillin/sulbactam, cefmetazole, cefoxitin, flomoxef, and cefoperazone/sulbactam have sufficient anti-anerobic activity for this situation

[e] Vancomycin is recommended to cover *Enterococcus* spp. for grade III community-acquired acute cholangitis and cholecystitis, and healthcare-associated acute biliary infections. Linezolid or daptomycin is recommended if vancomycin-resistant *Enterococcus* (VRE) is known to be colonizing the patient, if previous treatment included vancomycin, and/or if the organism is common in the community

Thank You !

Giảng viên : Vũ Quang Hưng