

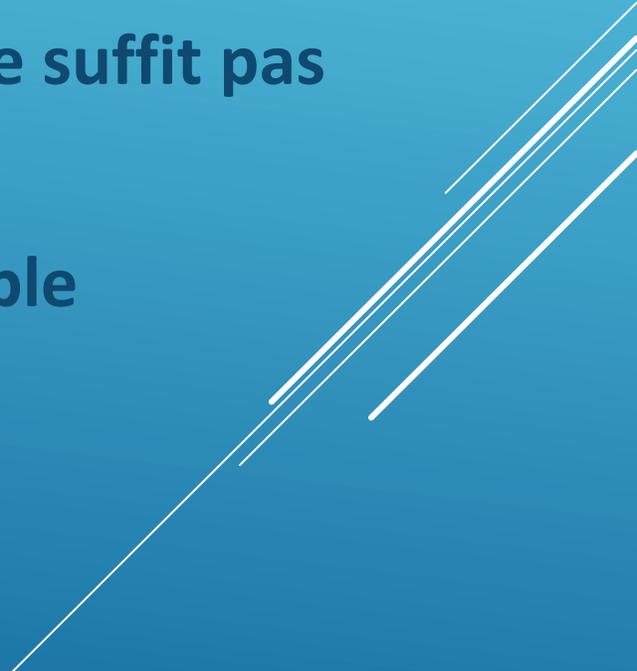


# MACRO LITHIASSE PLACE DE LA MACRO DILATATION DU SO

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# INTRODUCTION

- ▶ CPRE : traitement standard pour les calculs des voies biliaires
  - ▶ 10 a 15 % des calculs: le traitement conventionnel ne suffit pas
  - ▶ Place de la cholangioscopie per orale +++ qd disponible
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- A decorative graphic consisting of several parallel white lines of varying lengths, slanted diagonally from the bottom right towards the top right, set against a blue gradient background.

# DÉFINITION

## ▶ Dilatation du SO

- ▶ EPBD( endoscopic papillary balloon dilatation) 1982 ballon 10 mm
- ▶ EPLBD(Endoscopic Papillary Large Balloon dilatation )2003 ballon de 12 à 20 mm

## ▶ Macro calcul ou calcul difficile

- ▶ Diamètre (>12-15 mm),
- ▶ La présence de plusieurs calculs,
- ▶ Une forme inhabituelle
- ▶ des facteurs anatomiques (rétrécissement du canal biliaire en aval du calcul)

# RECOMMANDATION DE L'ESGE

- ▶ Une sphinctérotomie courte associée à une macro-dilatation de la papille comme approche de première intention en cas d'extraction difficile de calculs de la voie biliaire principale
- ▶ Une lithotripsie mécanique en cas de difficulté d'extraction de calculs de la voie biliaire principale, quand une sphinctérotomie associée à une macro-dilatation de la papille a échoué ou n'est pas adaptée à la situation,
- ▶ La réalisation d'une lithotripsie intra-luminale assistée par cholangioscopie (hydro-électrolytique ou laser) comme traitement efficace et sûr en cas de difficulté d'extraction de calculs de la voie biliaire

# EN PRATIQUE

## CONSENSUS INTERNATIONAL 2016

### MACRODILATATION

#### 1. Definition:

1.1. EPLBD is used to dilate the biliary orifice with a large-diameter balloon ( $\geq 12$  mm) and can be performed with or without EST.

#### 2. Indication:

- 2.1. In the removal of large or difficult bile duct stones, EPLBD can be used as an alternative to EML (evidence level: 1+, recommendation level: B).
- 2.2. EPLBD can be used as the initial method when large bile duct stones have been identified on endoscopic retrograde cholangiography or cross-sectional imaging (evidence level: 1+, recommendation level: B).
- 2.3. When conventional stone removal after EST fails, EPLBD can be considered (evidence level: 1+, recommendation level: B).
- 2.4. In patients with obvious distal bile duct strictures or a nondilated bile duct, EPBLD is not recommended because of the increased risk of perforation (evidence level: 2+, recommendation level: C).
- 2.5. EPLBD without EST is preferred over EPLBD with EST in patients with coagulopathy (evidence level: 4, recommendation level: D).

#### 3. Techniques:

- 3.1. The maximal diameter of the balloon should not exceed the diameter of the distal bile duct (evidence level: 3, recommendation grade: D).
- 3.2. The balloon should be inflated slowly in gradual steps (evidence level: 3, recommendation grade: D).
- 3.3. The usual duration of balloon dilation is approximately 30 to 60 seconds after disappearance of the waist (evidence level: 1-, recommendation grade: C).

#### 4. Outcomes:

- 4.1. The initial and overall success rates of EPLBD with EST are comparable to those of EST alone (evidence level: 1+, recommendation grade: A).
- 4.2. Overall success rates of EPLBD with and without EST for bile duct stone clearance are comparable (evidence level: 2++, recommendation grade: B).
- 4.3. EPLBD with EST can reduce the need for EML (evidence level: 1+, recommendation grade: B).

#### 5. Specific cases:

- 5.1. The presence of a periampullary diverticulum may not increase the risk of adverse events in patients who undergo EPLBD (evidence level: 2++, recommendation grade: B).
- 5.2. In patients with surgically altered anatomy, EPLBD may be an effective and safe procedure to remove bile duct stones (evidence level: 3, recommendation grade: D).
- 5.3. In patients with a previous EST, EPLBD without repeated EST may be effective and safe for the removal of recurrent stones (evidence level: 2-, recommendation grade: D).

#### 6. Adverse events:

- 6.1. The rate of overall adverse events for EPLBD with EST is lower than that for EST alone in patients with large or difficult stones (evidence level: 1-, recommendation grade: C).
- 6.2. EPLBD may not increase the risk of pancreatitis (evidence level: 1+, recommendation grade: B).
- 6.3. EPLBD with large EST may increase the risk of bleeding (evidence level: 2++, recommendation grade: C).
- 6.4. EPLBD with EST has a perforation rate similar to that of EST. A distal CBD stricture is a major risk factor for perforation (evidence level: 1+, recommendation grade: B).

# INDICATION

1. **Macro dilatation (MD) avec ou sans SE alternative à la lithotritie**
2. **MD première intention qd MC diagnostiqué pendant ou avant CPRE**
3. **MD sans ST est recommandée pour les patients avec trouble de l'hémostase,**
4. **Sténose du bas cholédoque : MD n'est pas recommandée (perforation)**

# MATERIEL

- ▶ Sphincterotome
- ▶ Fil guide
- ▶ **Ballon de dilatation biliaire 5 cm longueur ou moins**
- ▶ **Seringue d'insufflation avec mannomètre**
- ▶ Ballon d'extraction avec diamètre adapté
- ▶ PDC
- ▶ **Prothèse plastique+++++**
- ▶ **Prothèse métallique totalement couverte courte**

# BALLON DE DILATATION



Order Number	Inflated Balloon OD		Balloon Dilatation Length (cm)	Inflation Pressures		Catheter Size (Fr)	Minimum Working Channel (mm)	Working Length (cm)
	(mm)	(Fr)		(ATM)	(kPA)			
M00558920	8-9-10	24-27-30	3.0	3-5.5-9	304-608-1013	7.5	3.7	180
M00558930	10-11-12	30-33-36	3.0	3-5-8	304-557-912	7.5	3.7	180
M00558940	12-13.5-15	36-40.5-45	3.0	3-4.5-8	304-507-811	7.5	3.7	180
M00558860	6-7-8	18-21-24	5.5	3-6-10	304-608-1013	7.5	3.7	180
M00558870	8-9-10	24-27-30	5.5	3-5.5-9	304-557-912	7.5	3.7	180
M00558880	10-11-12	30-33-36	5.5	3-5-8	304-507-811	7.5	3.7	180
M00558890	12-13.5-15	36-40.5-45	5.5	3-4.5-8	304-456-811	7.5	3.7	180
M00558900	15-16.5-18	45-49.5-54	5.5	3-4.5-7	304-456-709	7.5	3.7	180
M00558910	18-19-20	54-57-60	5.5	3-4.5-6	304-456-608	7.5	3.7	180

# SPHINCTEROTOME AVEC BALLON



StoneMaster V combination EST+EPLBD  
device. **12-15 & 18 mm**

# COMMENT

- ▶ **Monter le ballon sur fil guide et le maintenir a mi chemin**
  - ▶ **Diamètre du ballon ne dépasse pas le diamètre de la VBP**
  - ▶ **Inflation prudente et progressive**
  - ▶ **Durée jusqu'à disparition de l'encoche(30- 60s)**
  - ▶ **Ne pas gonfler le ballon a coté du calcul**
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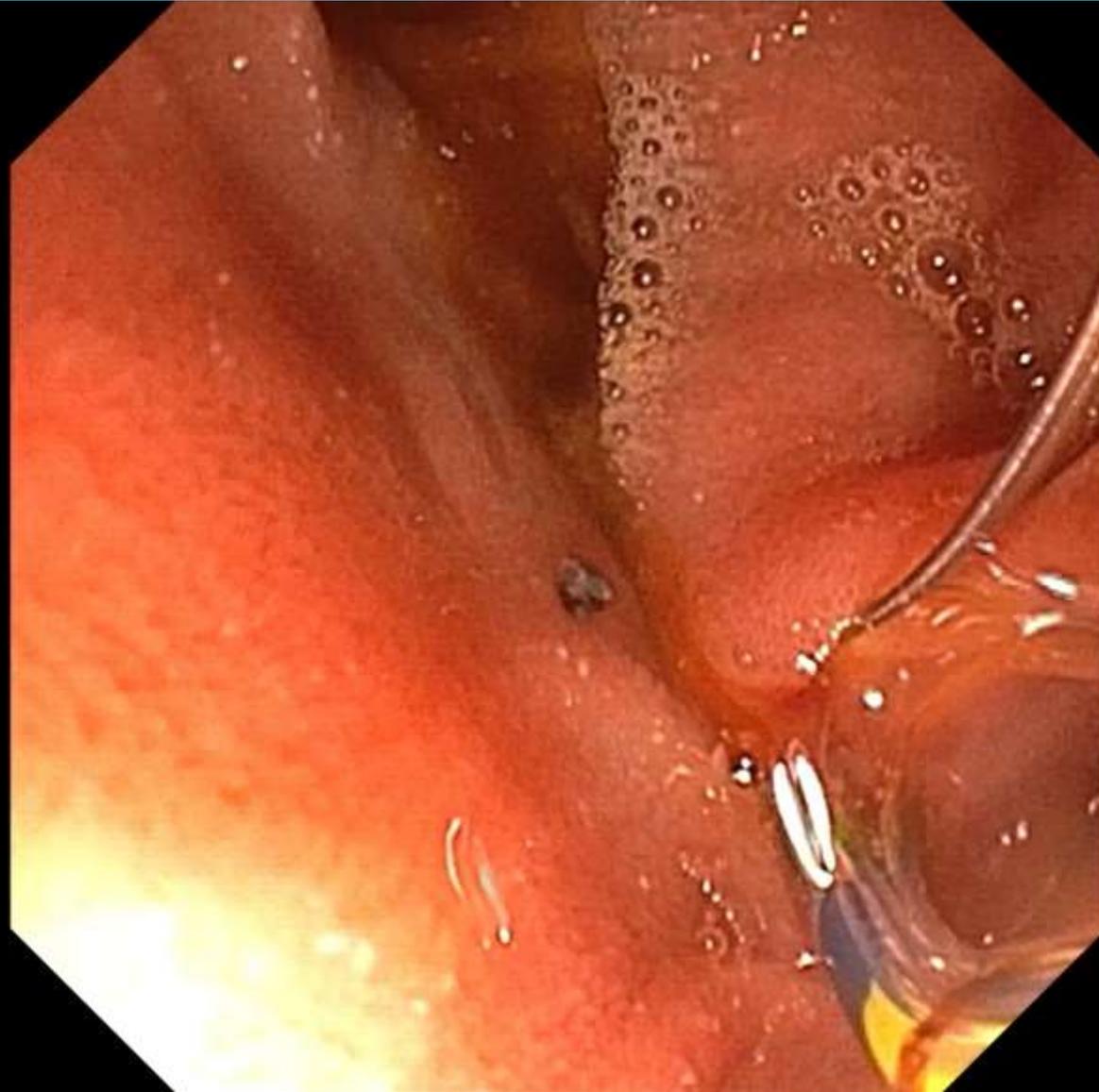
# SCOPIE DILATATION



# RISQUES

- ▶ Pancréatite post CPRE même risque que CPRE sans MD
- ▶ Hémorragie risque augmenté si associé a une large SE
- ▶ Perforation risque accru si sténose bas cholédoque ou ballon non adapté

# CAS 1

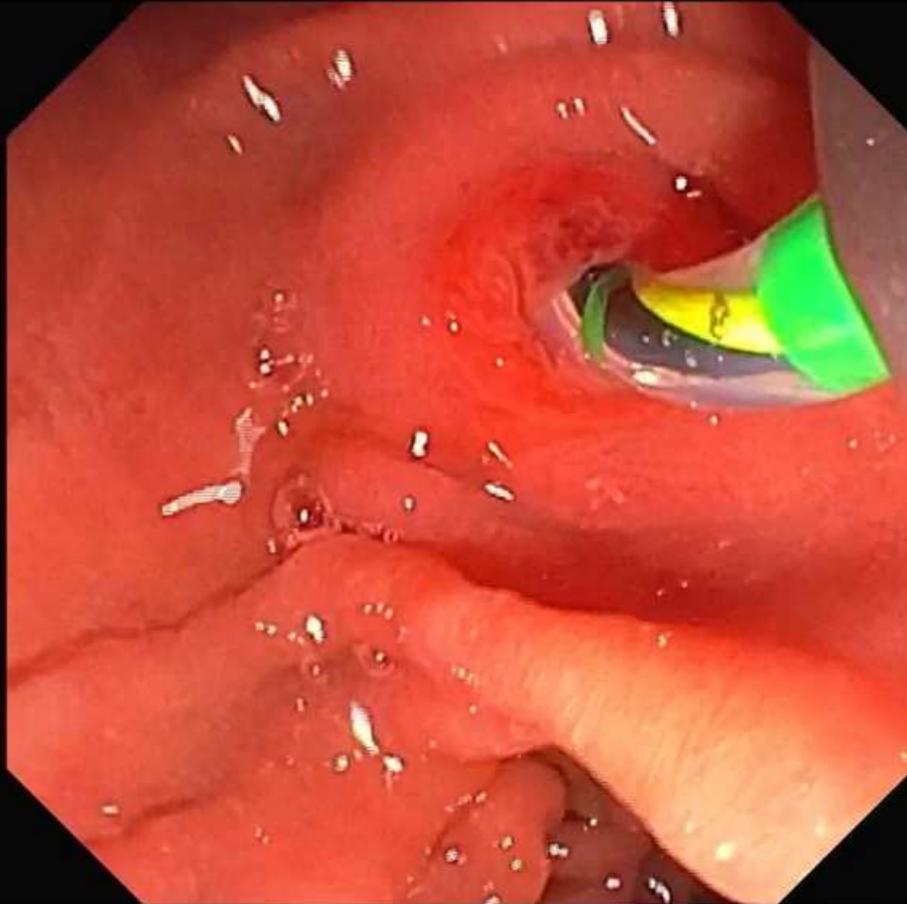


55 ans

Angiocholite sur 2 macro-lithiases

CAS 2

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19.16 mGy

73.89 mGy/min

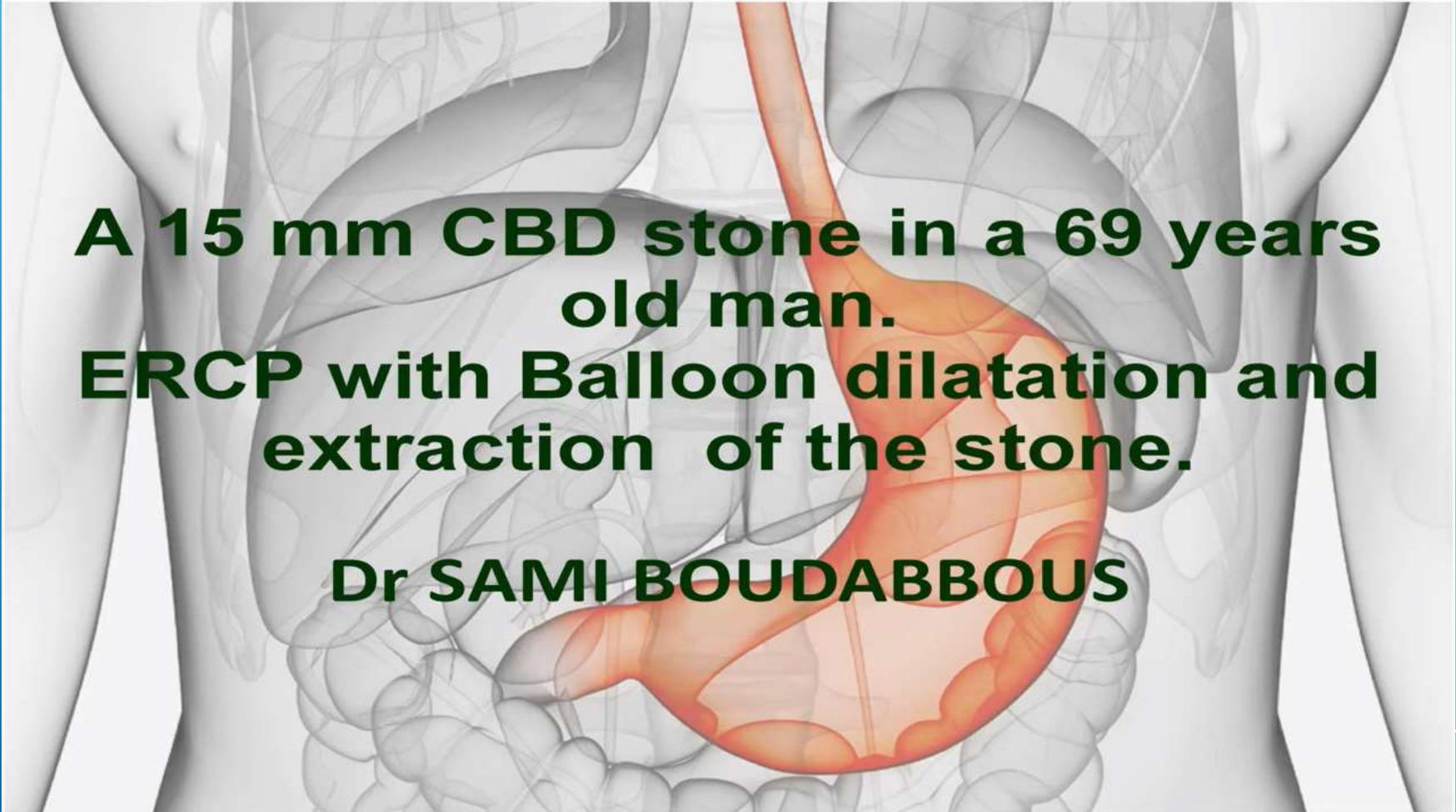


1 7186 101146

869.10 mGy\*cm<sup>2</sup>

Autowindow

# STONEMASTER V

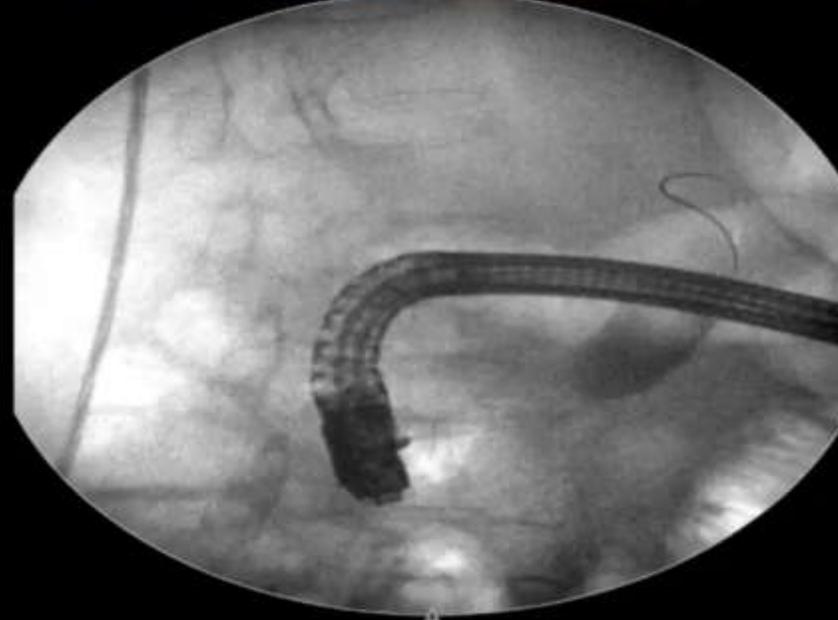


**A 15 mm CBD stone in a 69 years  
old man.  
ERCP with Balloon dilatation and  
extraction of the stone.**

**Dr SAMI BOUDABBOUS**

# STONEMASTER V

Dr S. BOUDABBOUS  
Advanced GI endoscopy



# CAS 3

**72 years old man, acute cholangitis since 3 days with acute pancreatitis grade B, under antivit K for arrhythmia**

**Patient under antibiotics, MRI found 3 CBD stones the largest one 12 x 28 mm with a CBD 15 mm, ERCP scheduled after withdrawal of antivit k.**

## **ERCP**

**We found a para diverticular papilla with an easy cannulation, sphincterotomy was done followed by large balloon dilatation ton 16 mm and extraction of 3 stones with a balloon.**

**Dr SAMI BOUDABBOUS**

# CAS 4

**90 years old woman with cholecystectomy 20 years ago, pre, seted with acute cholangitis, related to a 15 mm CBD stone.**

**ERCP**

**Choledochoduodenal fistula on the top of the papilla wall,**

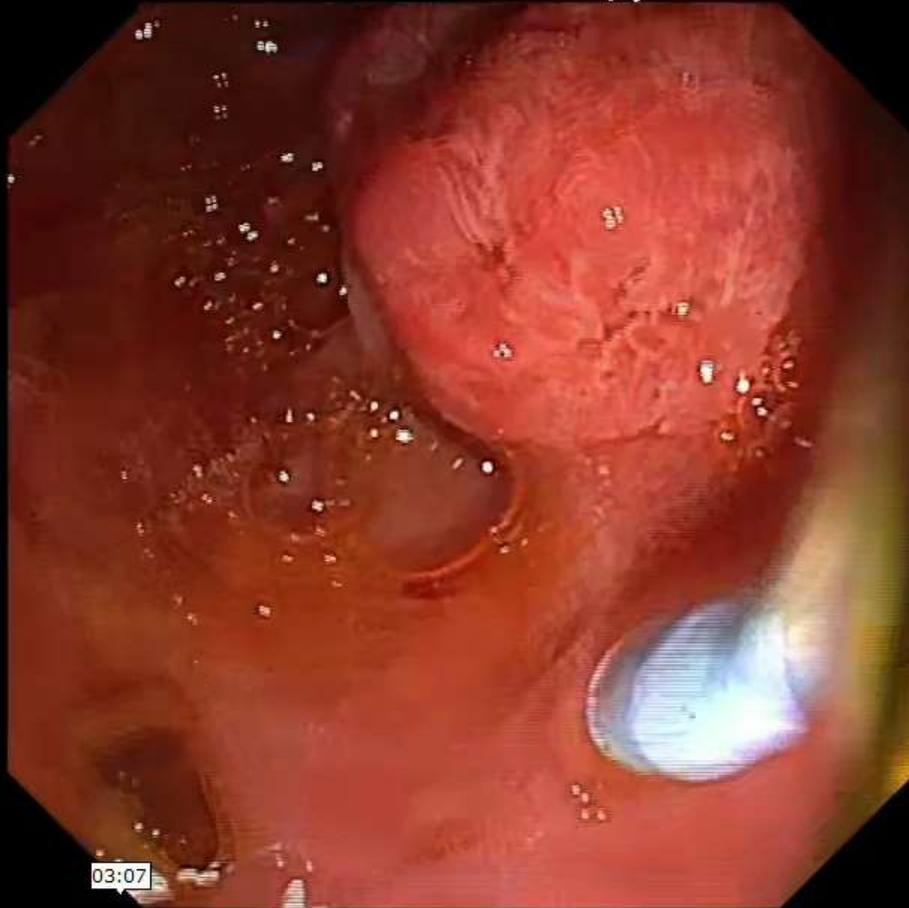
**Easy acces to the CBD.**

**Large balloon dilatation and extraction of the stone with a balloon.**

**Dr SAMI BOUDABBOUS**

# MACRO DILATATION & LITHOTRITHIE MACANIQUE

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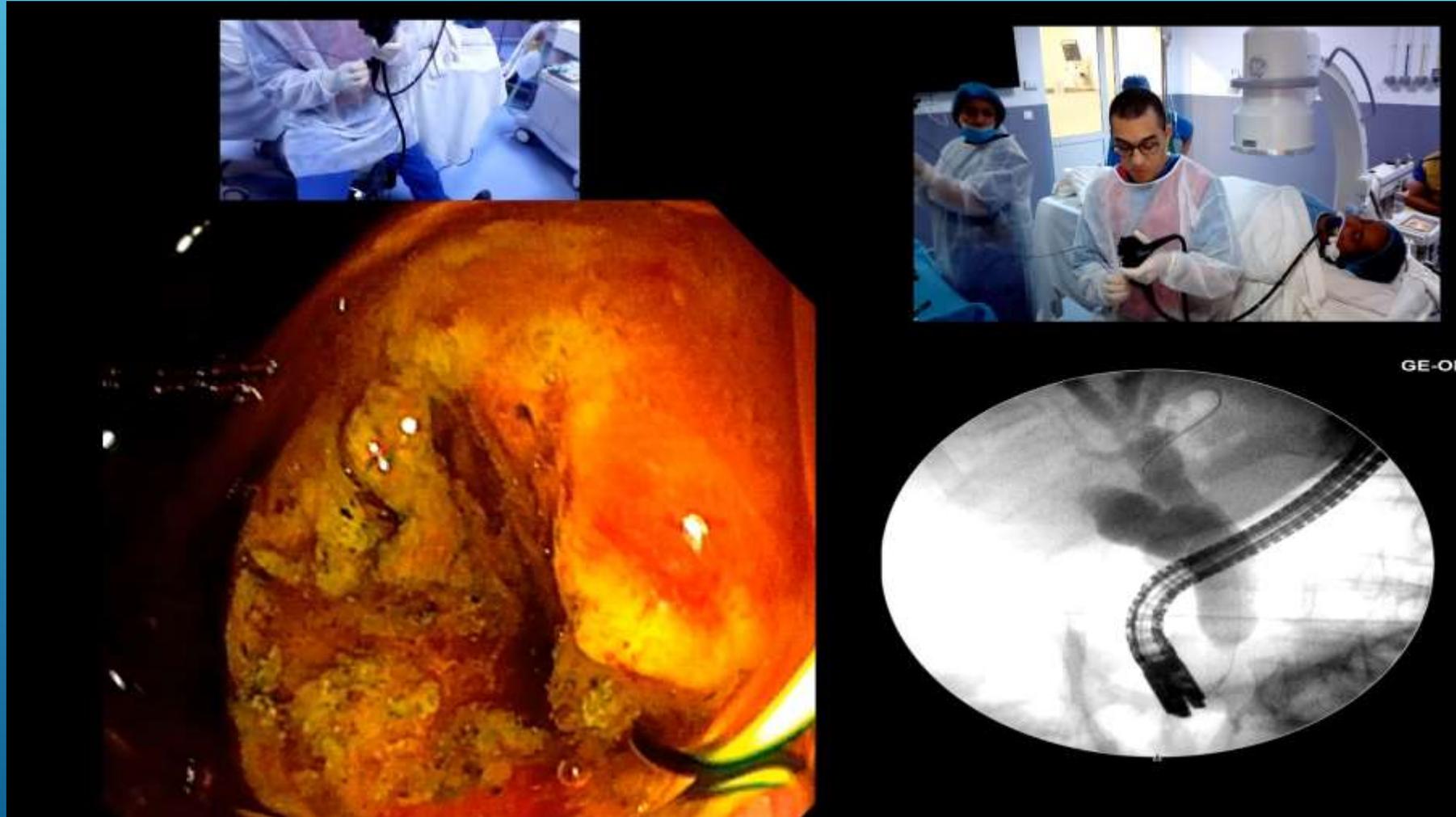
LIH

GE-O



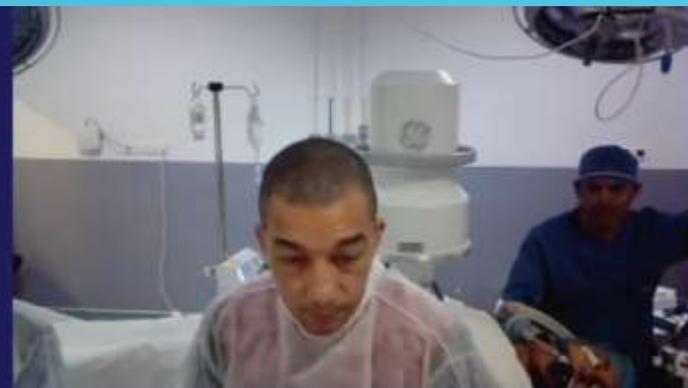
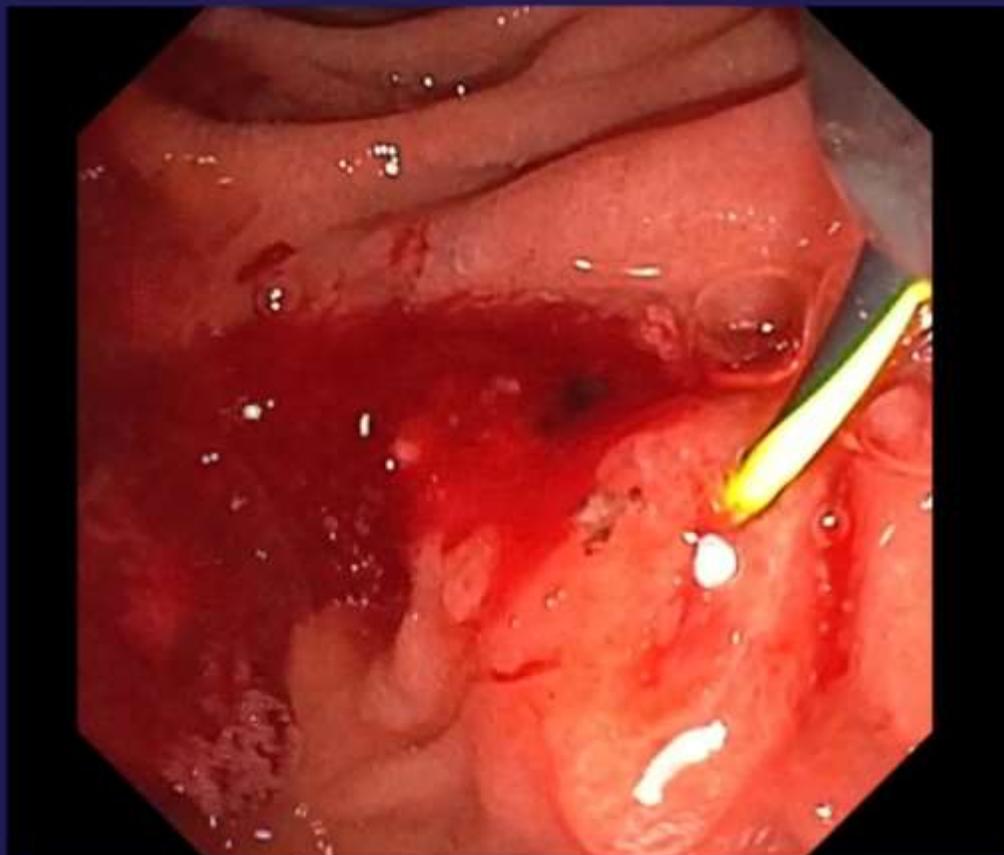
# CAS 7

65 ANS MACRO CACUL DE 25 X 18 MM



# QUAND ABANDONNER

Dr S. BOUDABBOUS  
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# CONCLUSION

- ▶ **MD technique qui a fait ses preuves**
- ▶ **Avoir un plan d'action avant la CPRE si macro calcul déjà connu**
- ▶ **Connaitre ses limites**
- ▶ **Avoir le matériel adapté**
- ▶ **Mieux vaud deux CPRE courte qu'une prolongée,**

**MERCI**

