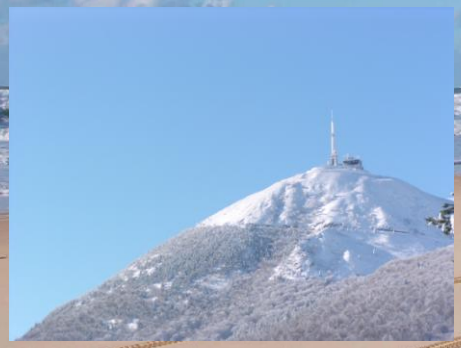
Coelio Chirurgie chez la femme enceinte



Merci .....

POUR L'INVITATION

ET L'OPPORTUNITE DE PARTAGER NOTRE EXPÉRIENCE DE LA CŒLIOSCOPIE OPERATOIRE

QUE CETTE COLLABORATION SE POURSUIVE ET S'AMELIORE ENCORE !

QU'ELLE SOIT UN EXEMPLE POUR UN **CHU** ET UNE **FAC** QUI SONT « TOO SMALL TO FIGHT »

M Canis

JL Pouly

G Mage

B Rabischong

K Jardon

R Botschorischvili

N Bourdel

C Houlle

D Savary

S Campagne

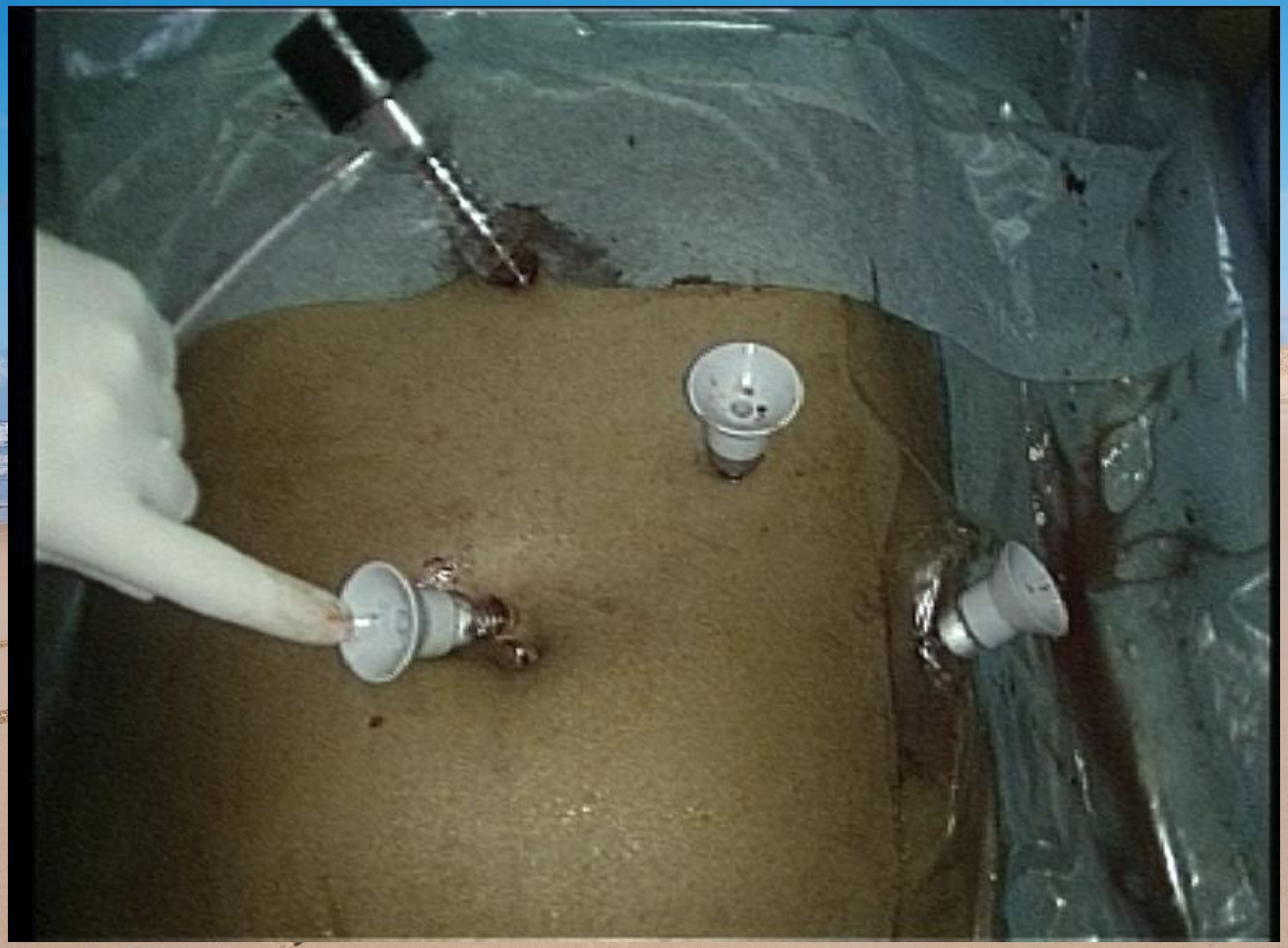
AS Azuar

N Favre

AS Gremeau

Dept Gyn Obst

Collaboration …… !



Coelio Chirurgie chez la femme enceinte

- Gold standard ?

Chirurgie chez la femme enceinte

- 0,2 à 1% des femmes enceintes seront opérées
- La fréquence des urgences abdominales est estimée à 1 / 675 grossesse
- La pr… la mêm…
- Les c… grossesse sont bien moindre que celles des complications de la pathologie en cause
- Il ne faut pas hésiter à opérer une femme enceinte si besoin

Coelioscopie

Chirurgie pendant la grossesse quelle voie d'abord ?

The American Journal of Surgery (2010) 200, 363–367

The American Journal of Surgery

Clinical Science

T

O

CONCLUSION: Laparoscopic appendectomy and cholecystectomy appear to be as safe as the respective open procedures in pregnant patients; however, this population in particular remains at risk for perinatal complications regardless of the method of abdominal access.

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Michael G. Corneille, M.D.[a,*], Theresa M. Gallup, M.D.[a], Thomas Bening, M.D.[a], Steven E. Wolf, M.D.[a], Caitlin Brougher, B.S., E.M.T.[a], John G. Myers, M.D.[a], Daniel L. Dent, M.D.[a], Gabriel Medrano, M.D.[b], Elly Xenakis, M.D.[b], Ronald M. Stewart, M.D.[a]

[a]Department of Surgery, Division of Trauma and Emergency Surgery, University of Texas, Health Science Center, San Antonio; [b]Department of Obstetrics and Gynecology, University of Texas, Health Science Center, San Antonio, TX, USA

Coelioscopie ou laparotomie?

	Effectif coelio	Morbi-mortalité foeto-maternelle	
Amos et al	7	Mortalité importante	3 péritonites 3 pancréatites
Boughizane et al	25	Nulle	
Akira et al	17	Moins que laparotomie	gassless
Oelsner et al	192	Moins que laparotomie	
Soriano et al	39	Moins que laparotomie	
Cristalli et al	8	Nulle	
Mathevet et al	48	Devenir obstétrical non modifié	
Yuen et al	67	Devenir obstétrical non modifié	
Reedy et al	2181	Pas de différence laparo/ coelio	
Mazze et al	100	Moins que laparotomie	
Purnichescu et al	21	Nulle	
Moore et al	14	Devenir obstétrical non modifié	
Rollins et al	137	Devenir obstétrical non modifié	
Oguri et al	13	Nulle	Gassless

Coelioscopie

Pourquoi encore des questions ?

- The Society of American Gastrointestinal Surgeons proposed such surveillance after the publication by Amos et al who reported 4 fetal deaths in a series of 7 pregnant patients, attributing these complications to prolonged acidosis despite not having recorded blood gas data during these procedures.

- The pregnant sheep model has been used to address some of these issues. However, a study in pregnant women demonstrated changes in the Pa(CO2)-EtCO2 gradient which were remarkably different from the results observed in the pregnant sheep model.

Adnexal Masses in Pregnancy: Fetomaternal Blood Flow Indices During Laparoscopic Surgery

Massimo Candiani, MD*, Silvia Maddalena, MD, Maurizio Barbieri, MD, Stefano Izzo, MD, Daniela Alberico, MD, and Stefania Ronzoni, MD

From the Department of Obstetrics and Gynecology, IRCCS San Raffaele Hospital (Drs. Candiani and Maddalena), the Department of Obstetrics and Gynecology, DMSD San Paolo (Drs. Izzo and Ronzoni), and the Department of Obstetrics, Gynecology and Neonatology, Fondazione Ospedale Maggiore Policlinico, Mangiagalli and Regina Elena (Drs. Barbieri and Alberico), Milan, Italy.

ABSTRACT **Study Objective:** To assess changes in uterine and umbilical arteries during laparoscopy in human pregnancy.
Design: Case series (Canadian Task Force classification III).
Setting: University tertiary care referral center for high-risk pregnancy and minimally invasive surgery.
Patients: Nine pregnant women who underwent first- and second-trimester laparoscopic surgery because of an adnexal mass.
Intervention: Laparoscopic cyst enucleation or annessiectomy.
Measurements and Main Results: No maternal complications and no miscarriages or adverse pregnancy outcome occurred. Mean (SD) gestational age at delivery was 39.1 (0.7) weeks, birth weight was 3390 (298) g, and Apgar score at 5 minutes was 9.6 (0.5). Mean uterine resistance index, umbilical artery pulsatility index, and fetal heart rate were measured using transvaginal ultrasonography at various times during surgery. Mean uterine resistance index and umbilical artery pulsatility index values remained constant during laparoscopy. Fetal heart rate was maintained in the normal range (120–160 bpm) but progressively decreased during the surgical procedure.
Conclusion: In human pregnancy, laparoscopic techniques do not seem to modify uteroplacental perfusion evaluated using noninvasive ultrasonography. Journal of Minimally Invasive Gynecology (2012) ■, ■–■ © 2012 AAGL. All rights reserved.

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Massimo Candiani, MD*, Silvia Maddalena, MD, Maurizio Barbieri, MD, Stefano Izzo, MD, Daniela Alberico, MD, and Stefania Ronzoni, MD

Fig. 1

Mean uterine resistance index in pregnant women measured at various times according to the study protocol. T_0 = day before surgery; T_1 = at induction of anesthesia; T_2 = during CO_2 insufflation; T_3 = during the

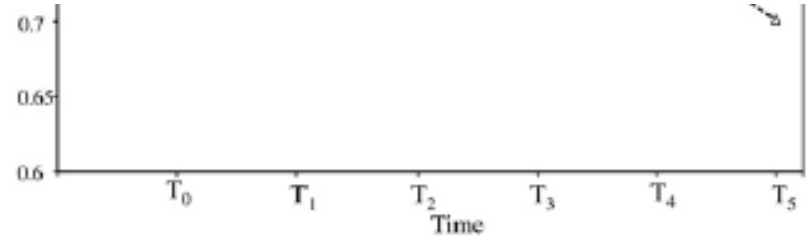
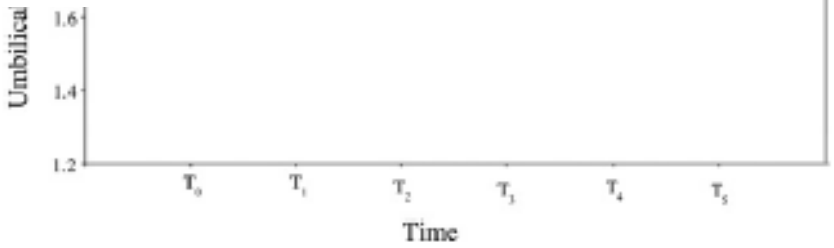


Fig. 2

Umbilical artery pulsatility index measured at various times according to the study protocol. T_0 = day before surgery; T_1 = at induction of anesthesia; T_2 = during CO_2 insufflation; T_3 = during the surgical proce-



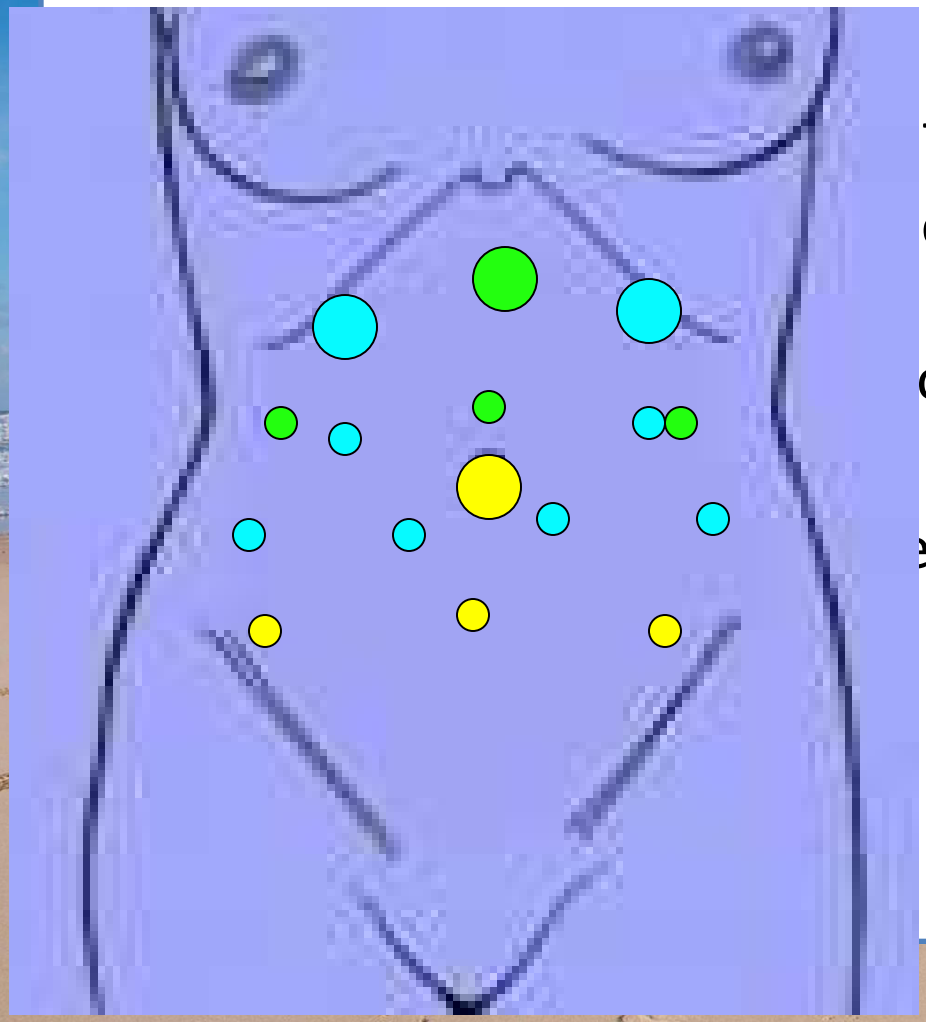
Measurements and Main Results: No maternal complications and no miscarriages or adverse pregnancy outcome occurred. Mean (SD) gestational age at delivery was 39.1 (0.7) weeks, birth weight was 3390 (298) g, and Apgar score at 5 minutes was 9.6 (0.5). Mean uterine resistance index, umbilical artery pulsatility index, and fetal heart rate were measured using transvaginal ultrasonography at various times during surgery. Mean uterine resistance index and umbilical artery pulsatility index values remained constant during laparoscopy. Fetal heart rate was maintained in the normal range (120–160 bpm) but progressively decreased during the surgical procedure.

Conclusion: In human pregnancy, laparoscopic techniques do not seem to modify uteroplacental perfusion evaluated using noninvasive ultrasonography. Journal of Minimally Invasive Gynecology (2012) ■, ■–■ © 2012 AAGL. All rights reserved.

Avantages de la coelioscopie

- Petites incisions
- Moins de manipulations intestinales
- Moins de manipulations utérines
- Transit plus rapide
- Lever précoce
- Diminution
  - du traumatisme
  - du risque thrombo embolique
  - de la douleur post op
  - du risque d'accouchement prématuré

Avantage de la coelioscopie



té péritonéale

éventuellement disponibles

un avantage majeur pour

ou le meilleur emplacement

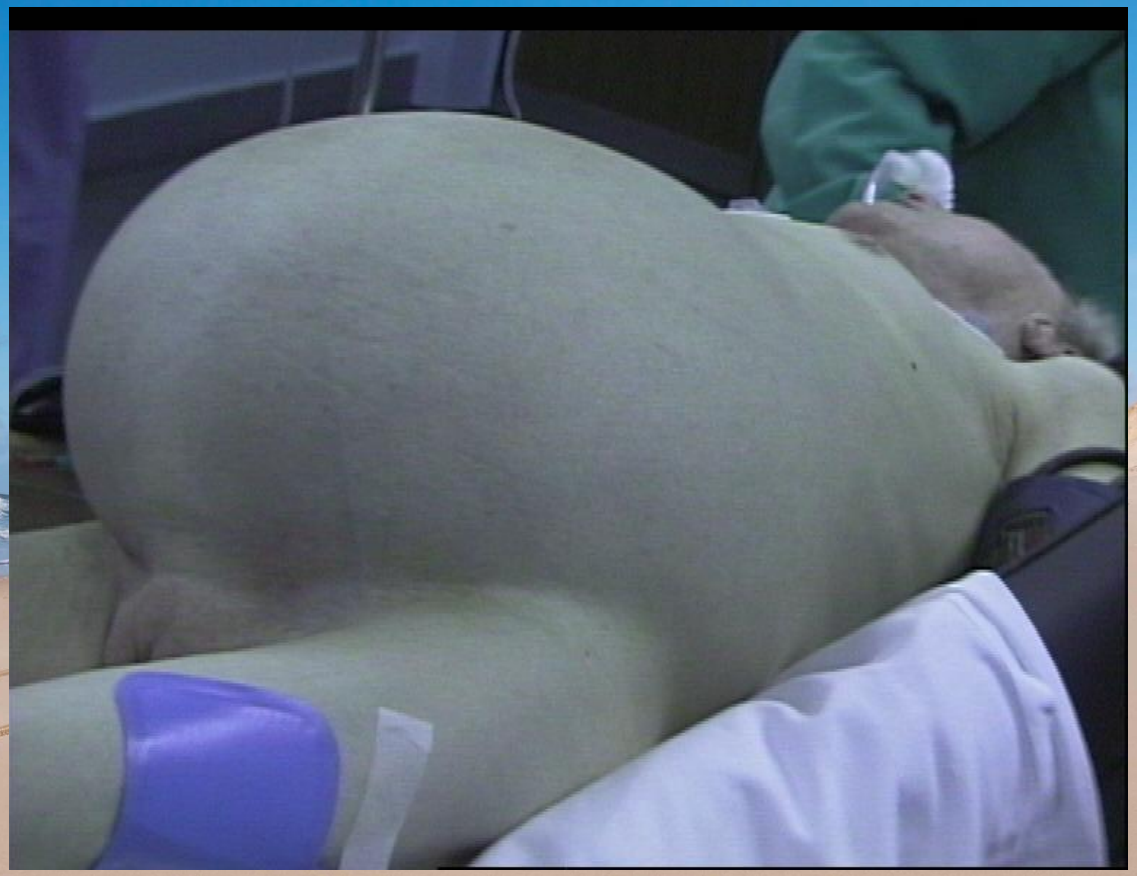
e la clinique est souvent

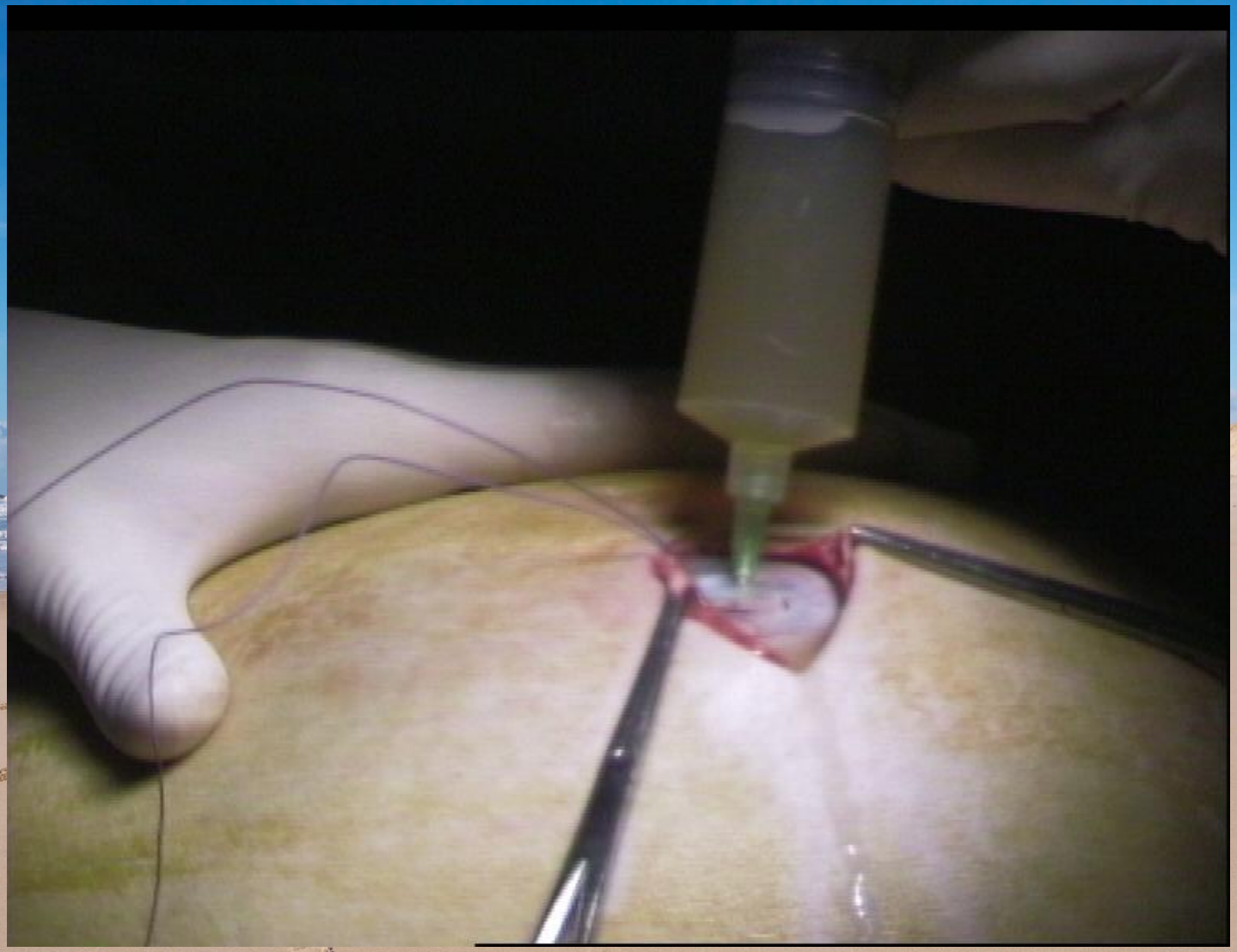
les explorations radiologiques

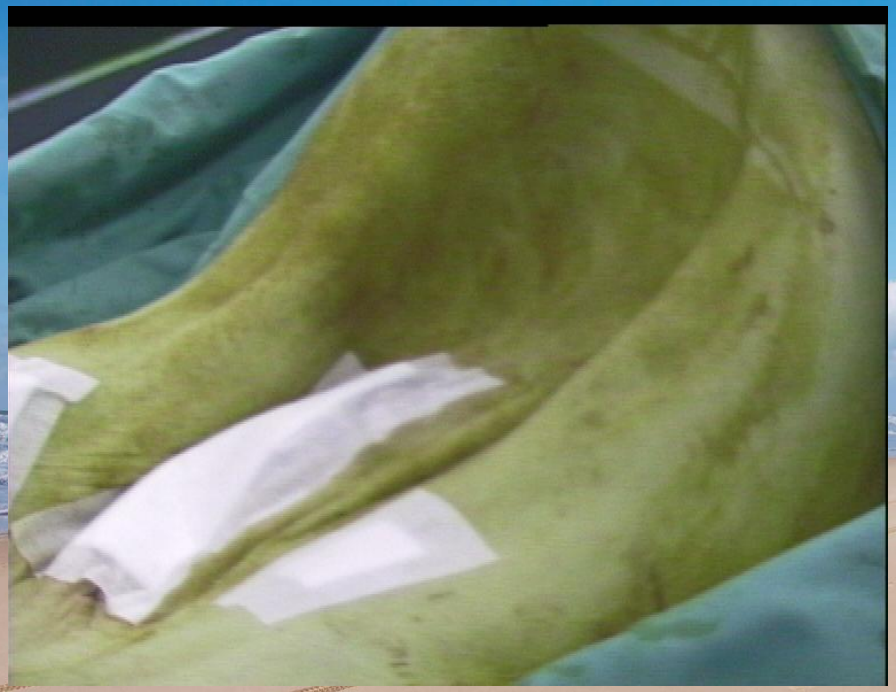
le diagnostic préopératoire

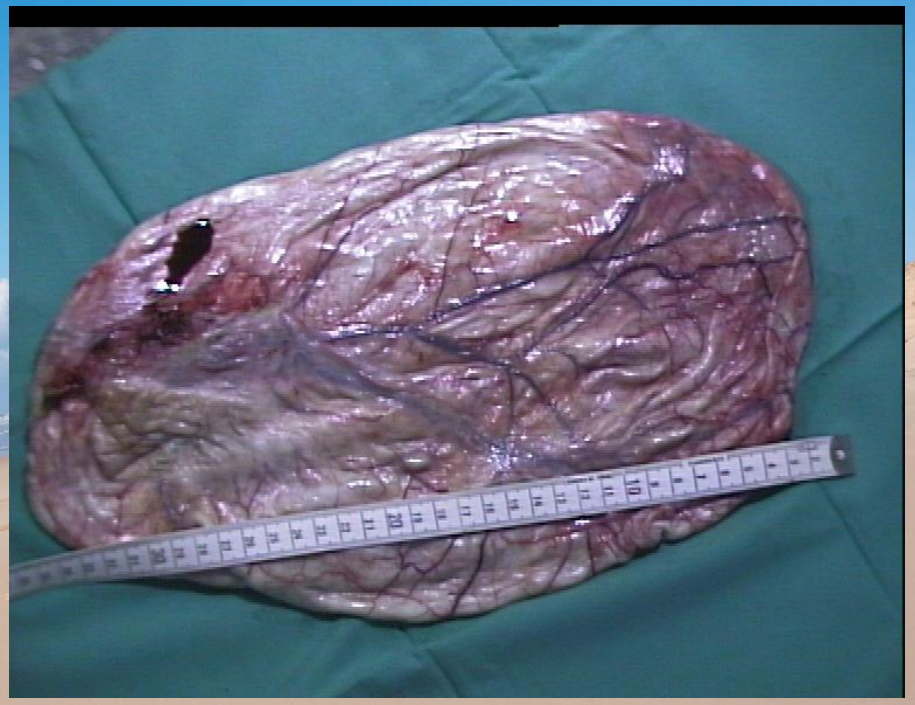
Mise en place de la coelioscopie

- C’est le challenge qui fait peur !!
- Cette peur est justifiée, les vaisseaux de l’utérus sont très volumineux
- Leur blessure doit être évitée
- Pas de geste aveugle et potentiellement à risque



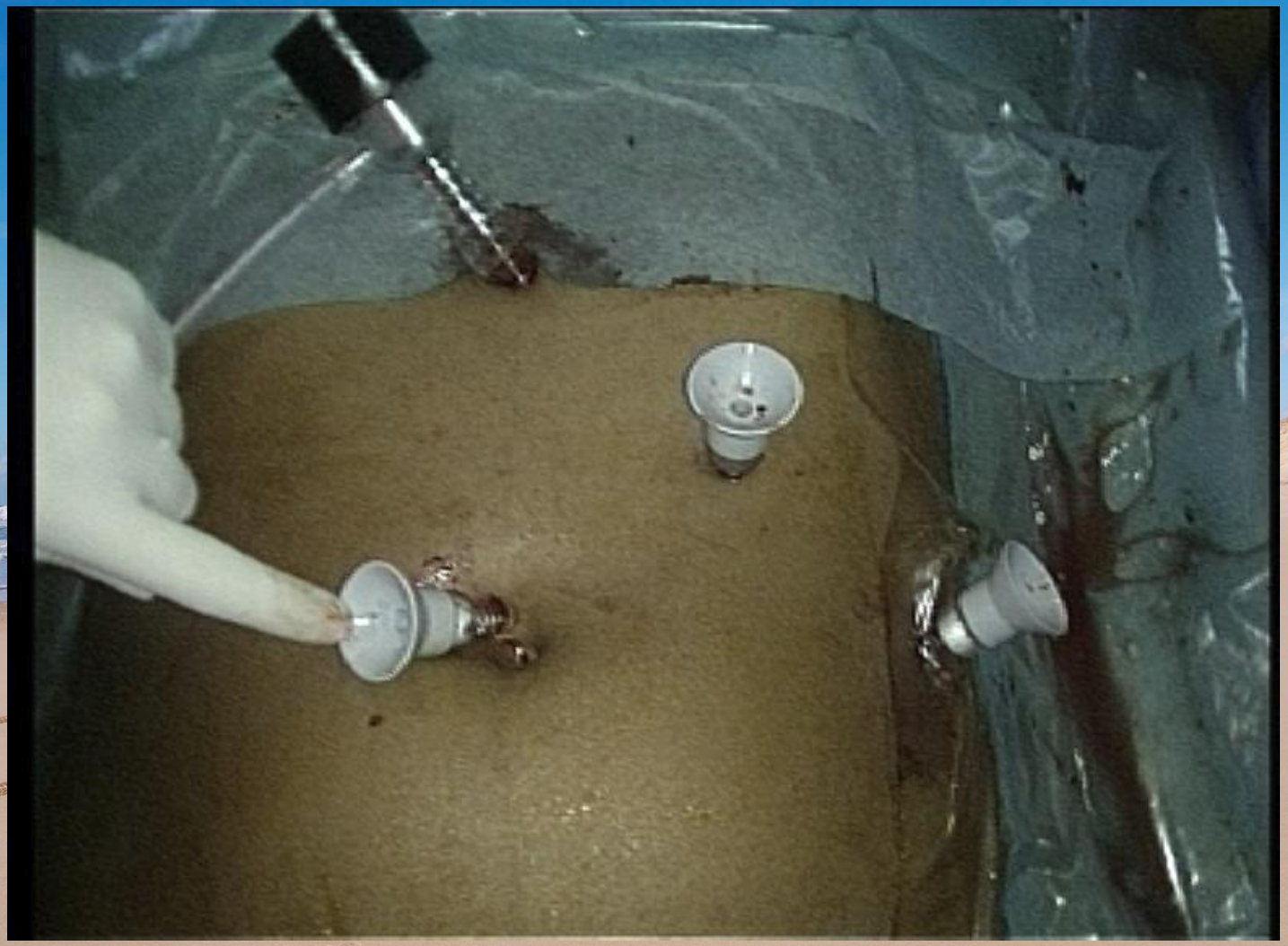






La réponse est simple !

- La méthode doit être adaptée aux circonstances
  - Terme de la grossesse
  - Morphologie de la patiente (distance ombilico pubienne)
  - Diagnostic étiologique du syndrome abdominal aigu ou localisation de la lésion à traiter



Installation

Laparoscopy for appendicitis and cholelithiasis during pregnancy

A new standard of care

M. D. Rollins,[1] K. J. Chan,[2] R. R. Price[1]

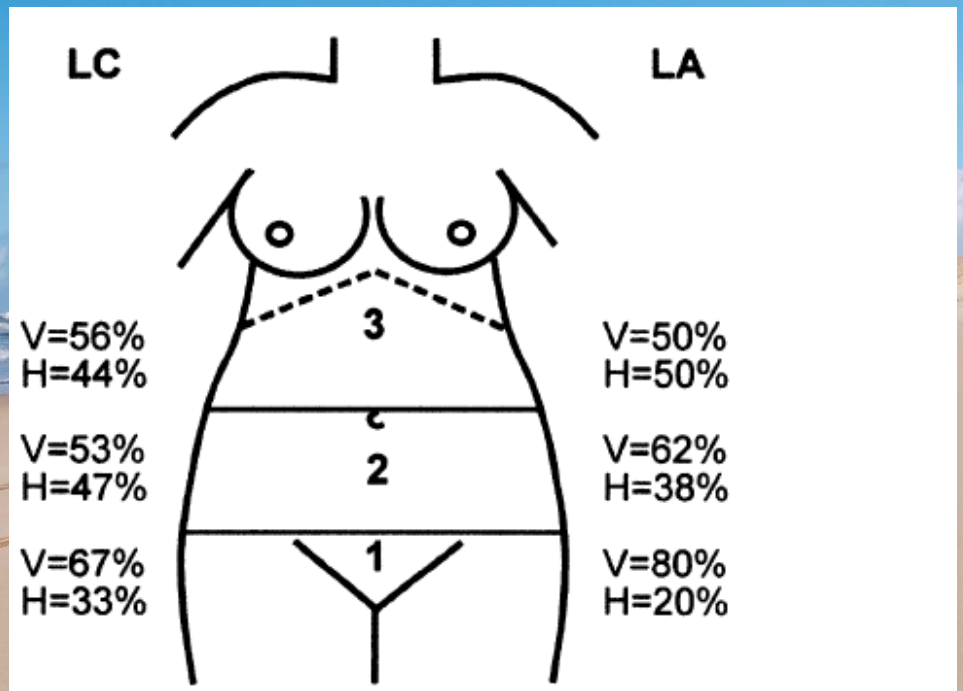
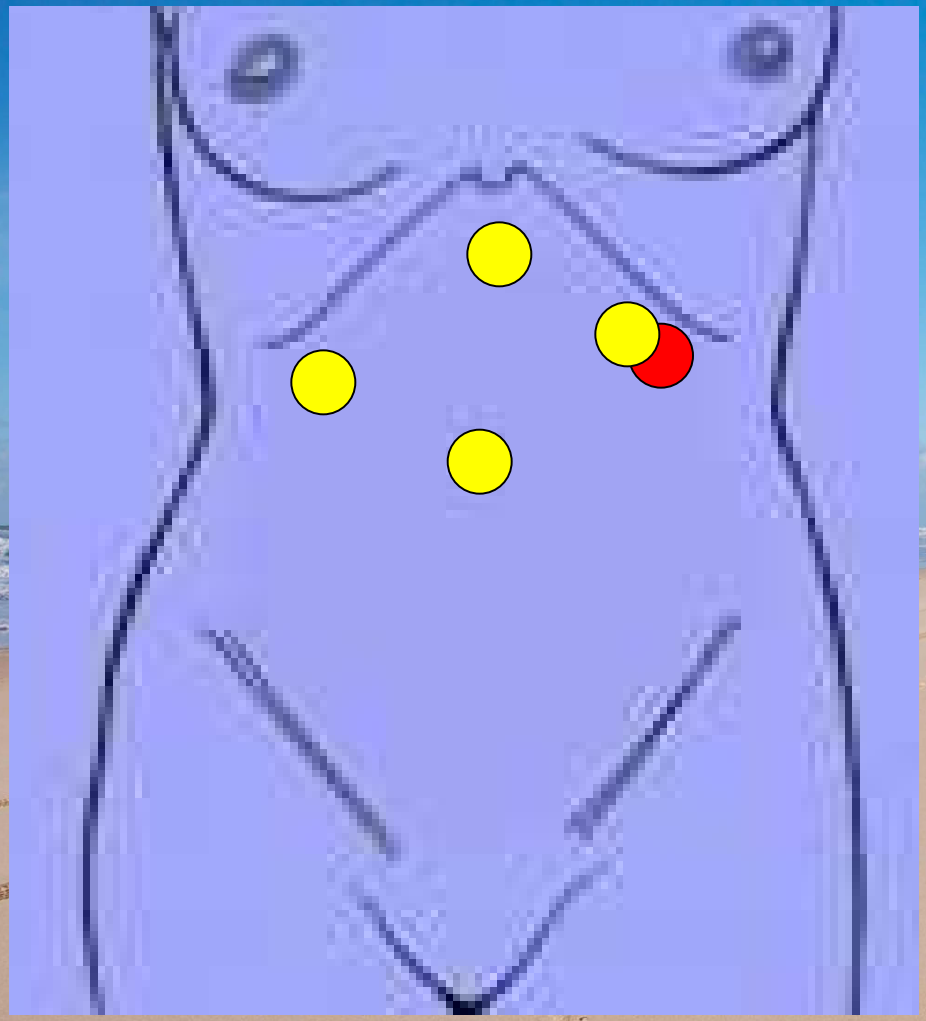


Fig. 3. The percentage of laparoscopic cholecystectomies (LC) and laparoscopic appendectomies (LA) in which either the Hasson technique (H) or Veress needle (V) was used for initial abdominal access according to gestational age at the time of surgery. 1, first trimester; 2, second trimester; 3, third trimester.

2 Méthodes

- Pneumopéritoine avec une aiguille quand cela est confortable
- Open laparoscopie chaque fois qu'il existe un doute, mais il faut disopser de trocart à ballonet qui permettent une bonne étanchéité du pneumopéritoine ce qui permet une bonne installation
- Pas de trocart direct !!

Installation



- First trimester, beginning of the 2nd
- 2nd trimester
- Third trimester

N O

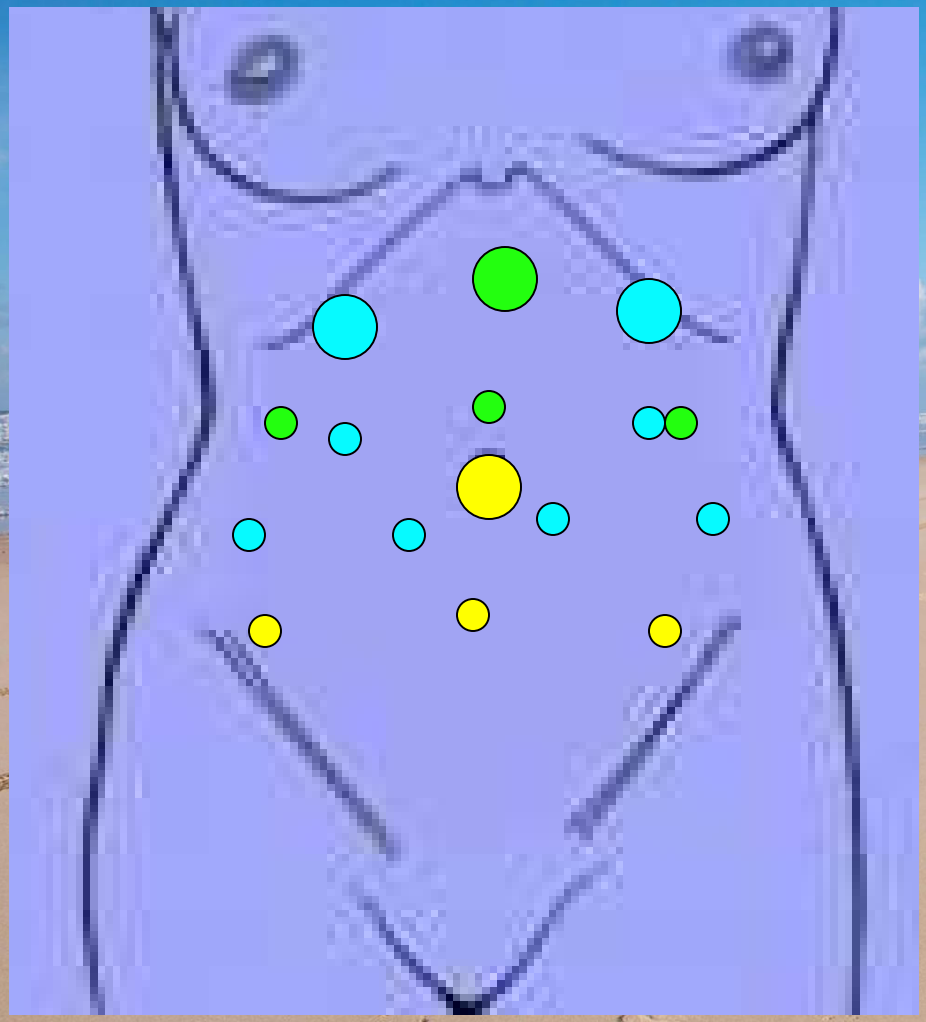
Trocarts opératoires

- Triangulation +++
- Ils doivent être placés au dessus de l'utérus
- Le chirurgien doit s'adapter en fonction des conditions locales et du diagnostic
- On ne travaille pas de manière fiable si il faut éviter l'utérus à chaque geste !!
- Le trocart doit permettre à l'instrument d'être actif sans être géné par l'utérus

Installation

- Pas de canulation utérine
- Inclinaisons latérales de la table ++++
- Touchers pelviens

Installation Trocarts opératoires

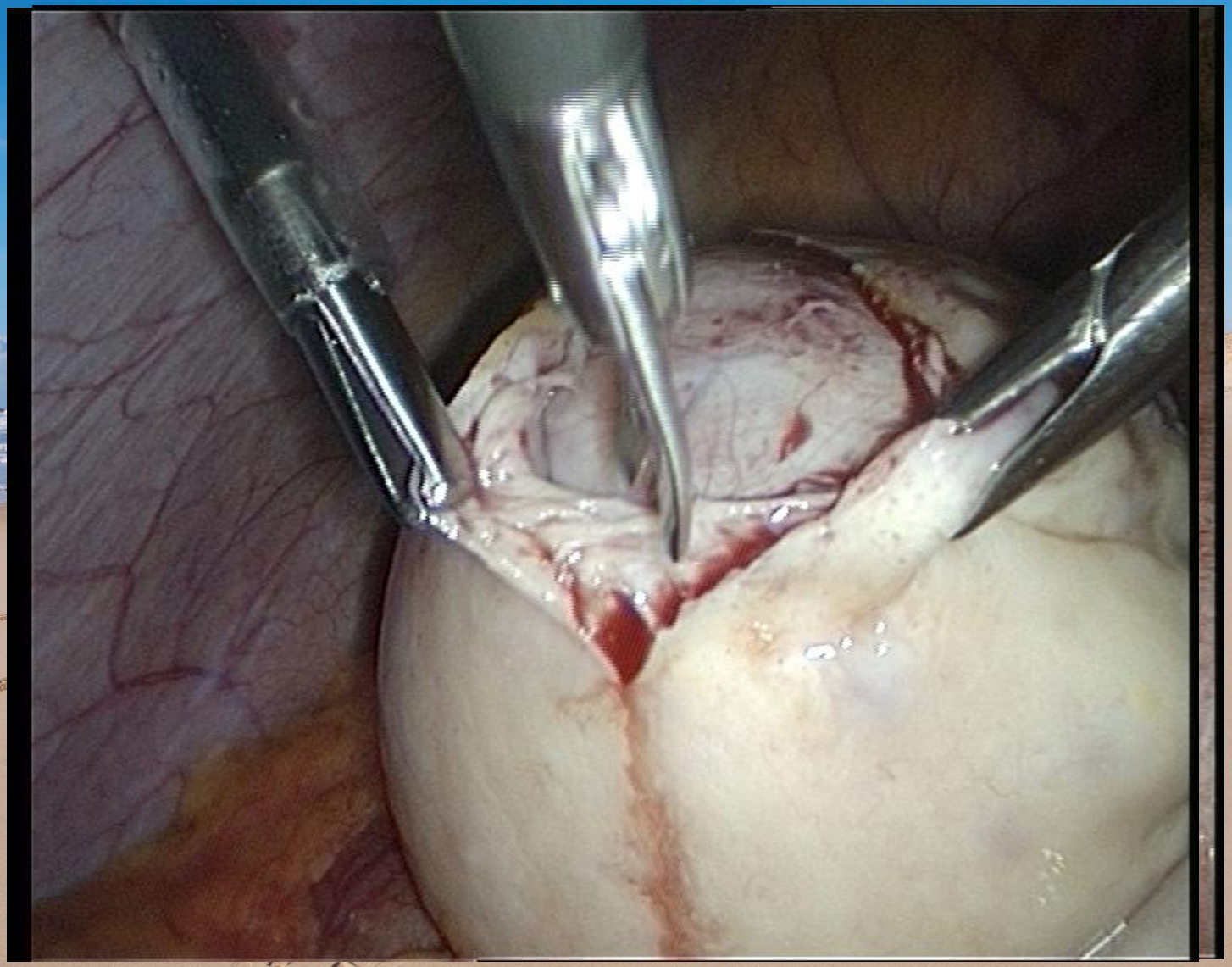


- First trimester, beginning of the 2nd
- 2nd trimester
- Third Trimester

Trocarts opératoires

- Une chance la surface de l’abdomen augmente +++

Example



Quelle pression ?

- La plus basse possible

The role of intraperitoneal pressure is confirmed in clinical studies

Human Reproduction, Vol.26, No.5 pp. 1073–1081, 2011
Advanced Access publication on March 9, 2011 doi:10.1093/humrep/der055

human reproduction

ORIGINAL ARTICLE *Gynaecology*

Impact of intraperitoneal pressure and duration of surgery on levels of tissue plasminogen activator and plasminogen activator inhibitor-1 mRNA in peritoneal tissues during laparoscopic surgery†

Sachiko Matsuzaki [1,2,*], Revaz Botchorishvili [1], Kris Jardon [1], Elodie Maleysson [1], Michel Canis [1,2], and Gérard Mage [1,2]

[1]Chirurgie Gynécologique, CHU Clermont-Ferrand, CHU Estaing, 1, Place Lucie Aubrac, 63003, Clermont-Ferrand, France [2]CENTI, University of Auvergne Clermont I, 2ETG, Bâtiment 3C, 28, Place Henri Dunan, 63000, Clermont-Ferrand, France

Study design

Patients

Laparoscopic hysterectomy
with/without promontofixation

CO2 pneumoperitoneum
8 mmHg

CO2 pneumoperitoneum
12 mmHg

Gene expression profile
by PCR based Microarray

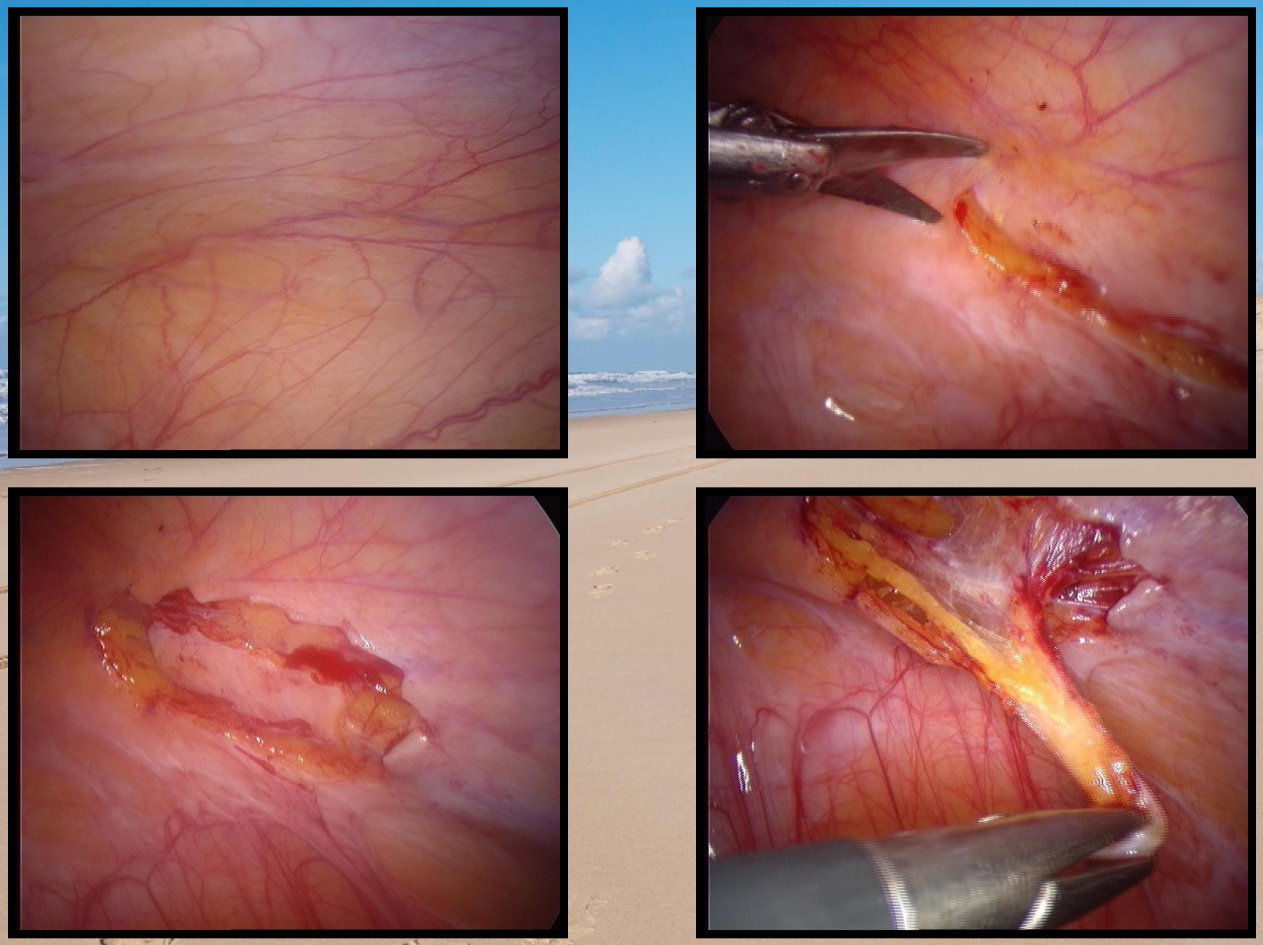
60 min

Peritoneal tissue collection

60 min

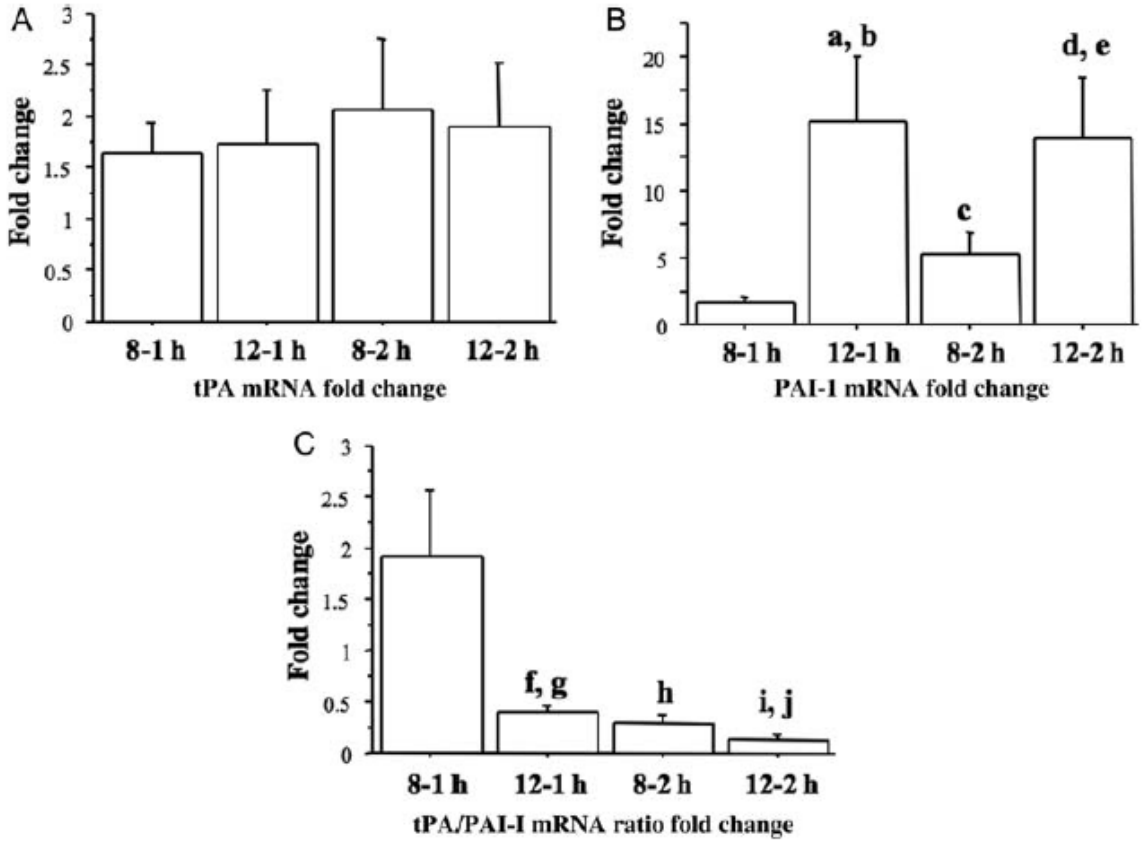
Peritoneal tissue collection

Molecular modifications of the peritoneum during a CO2 pneumoperitoneum

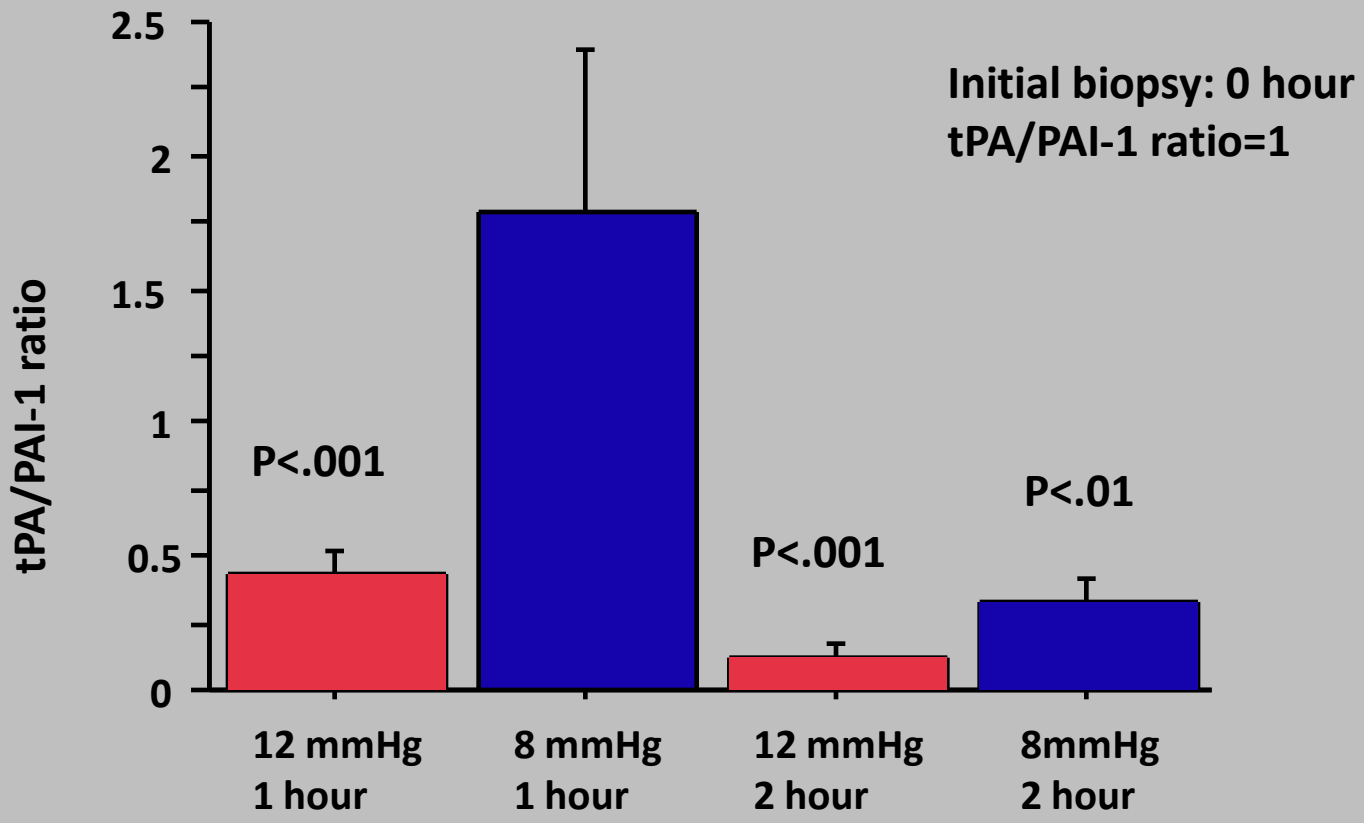


Peritoneal biopsy

Human study


A
Fold change
3
2.5
2
1.5
1
0.5
0
8-1 h
12-1 h
8-2 h
12-2 h
tPA mRNA fold change
B
Fold change
20
15
10
5
0
a, b
c
d, e
8-1 h
12-1 h
8-2 h
12-2 h
PAI-1 mRNA fold change
C
Fold change
3
2.5
2
1.5
1
0.5
0
f, g
h
i, j
8-1 h
12-1 h
8-2 h
12-2 h
tPA/PAI-I mRNA ratio fold change

tPA/PAI-1 ratio during a CO_2 pneumoperitoneum



tPA: tissue plasminogen activator, PAI-1: plasminogen activator inhibitor-1

Conclusion

- In conclusion, the results of the present study suggest that a low IPP (8 mmHg) may be better than the standard IPP (12 mmHg) to minimize the impact on the peritoneal fibrinolytic system during a CO2 pneumoperitoneum.

- In addition, the results of the present mouse study suggest that the critical time for the prevention of post-operative adhesion formation by increasing peritoneal fibrinolytic activity might be during surgery and up to 4 h after surgery.

Mais la pression est un compromis

- Entre installation et traumatisme
- Si le chirurgien est mal installé, le risque de traumatisme lié à cet inconfort est supérieur au bénéfice du à la basse pression
- Un bon relachement pariétal est surement un gage de sécurité pour la patiente

La cœlioscopie est voie d'abord de référence chez la femme enceinte