



**ONDU  
ANNISIKE**

# **SAFE CESAREAN SECTION**

***by***

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**Professor of O.B.G.**

**VIMS, BELLARY**

# EVIDENCE- BASED MEDICINE



JOSHI SUYAJNA D.

# UNSAFE OBSTETRICIAN

- "Cases of surgeries being done on the wrong patient, on the wrong part of his body and surgical equipment being left behind is very common in India. So a checklist which guides the team at three phases of an operation —
- before induction of anaesthesia,
- before skin incision and
- before the patient leaves the operating room — is vital,"
  - TOI- 26.06.2008



# 'Millions die of preventable surgical injuries every year'

26 Jun 2008, 0347 hrs IST, Kounteya

Sinha,TNN

- *More than **seven million** people across the globe suffer from preventable surgical injuries every year, a **million** of them even dying during or immediately after the **surgery**, a WHO study has said.*

THE TIMES OF INDIA



# Estimation of the Global Volume of Surgery' — published in the 'The Lancet' journal on Wednesday 25-06-2008

- In developing countries, the death rate was nearly 10% for a major surgery. Mortality from general anaesthesia affected one in 150 patients while infections were reported in 3% of surgeries with the mortality rate being 5%. Nearly 50% of the adverse effects of surgery were preventable.

**THE TIMES OF INDIA, BANGALORE FRIDAY, JUNE 27, 2008**

## 'Millions die of preventable surgical injuries every year'

**Alarmed, WHO Brings Out 24-Point Checklist To Prevent Complications**

Kounteya Sinha | TNN


**New Delhi:** More than seven million people across the globe suffer from preventable surgical injuries every year, a study of the World Health Organization (WHO) has revealed. The study, titled 'An Estimation of the Global Volume of Surgery', was published in the 'The Lancet' journal on Wednesday. WHO said that safety of patients during surgery had emerged as a substantial public health concern.

According to it, China conducted the highest number of surgeries followed by Russia and India. The study said nearly 3-16% of all inpatient surgical procedures in developed countries resulted in unnecessary complications with death rates being nearly 8%.

In developing countries, the death rate was nearly 10% for a major surgery. Mortality from general anaesthesia affected one in 150 patients while infections were reported in 3% of surgeries with the mortality rate being 5%. Nearly 50% of the adverse effects of surgery were preventable.

This made WHO's 'Safe Surgery Saves Lives' initiative come out with a 24-point checklist on Wednesday which helps to improve anaesthetic safety practices, avoid infections and improve communication among members of surgical teams. When followed, this could save the lives of surgical complications. A pilot study involving 3,600 patients in Stephen's Hospital in Delhi was conducted to see if the checklist could help.

### FATAL INCISION



Country	Per head total expenditure on health (\$US 2004)	Avg surgical rate (per 1,00,000 pop/yr)	Expected range of annual operations
China	277	2659	3.19-3.84 cr
Russia	512	441	56-65 lakh
India	51	369	37-44 lakh
Indonesia	118	1462	29-35 lakh
Iran	604	4744	29-36 lakh
South Korea	1135	6684	

**234 million** surgical procedures are undertaken annually across the globe. Of these, 15 million die each year as a result of surgical complications.

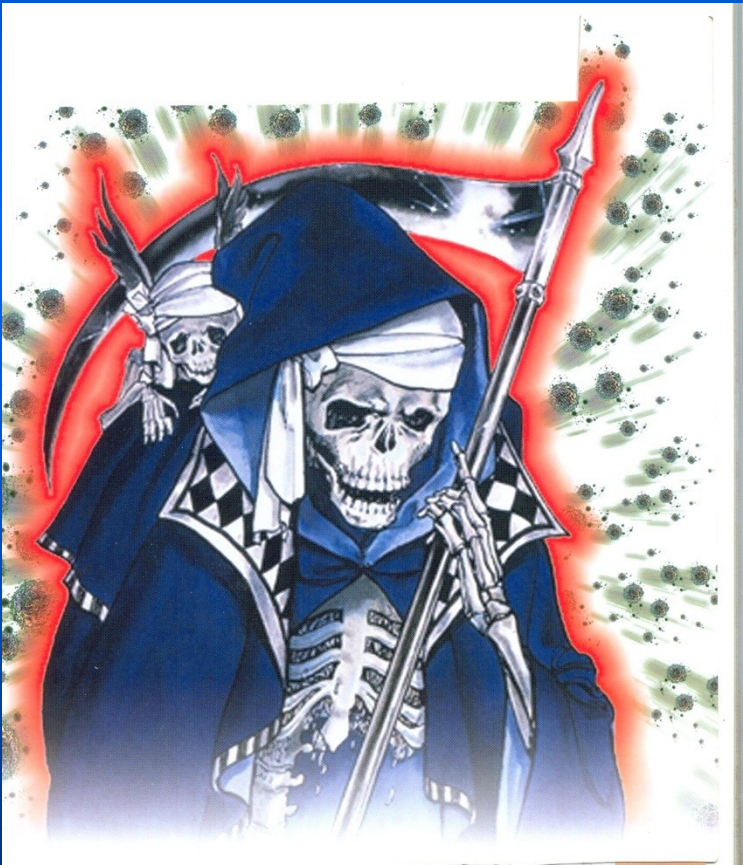
**5-10%** death rate during major surgery in developing countries.

- Mortality from general anaesthesia alone is high as one in 150.
- Studies suggest that approx 50% of these complications may be preventable.
- Surgeries are mostly done

**New Delhi:** There for HIV patients in Ahmedabad and H have become resistive and retroviral are the only known to suppress the HIV. The National AIDS Board (NACB), headboard Narash, meeting on June 1 roll out life-saving ART drugs free to all the four places. The hospitals provide the treatment. Maulana Azad Medical College (Kolkata) and Surgeon General's Hospital (Ahmedabad) NACB also cleared Manipal, Karnataka and Uttar Pradesh second-line drugs will be out from December. The first-line ART is taken by the WHO led to study operation relating to second-line. The National AIDS organization targets to such first-line ARTs patients on second-line by the end of 2008. India rolled out a therapy for the first time. The announcement made by health ministry on World AIDS Day.

# IS C.S. SAFE ?

# NO !





# IS C.S. SAFE ?

...if a C.S is not done, the woman and her baby take the risks

...while if the C.S is done, the doctor takes the risk



# MORTALITY OF PATIENT



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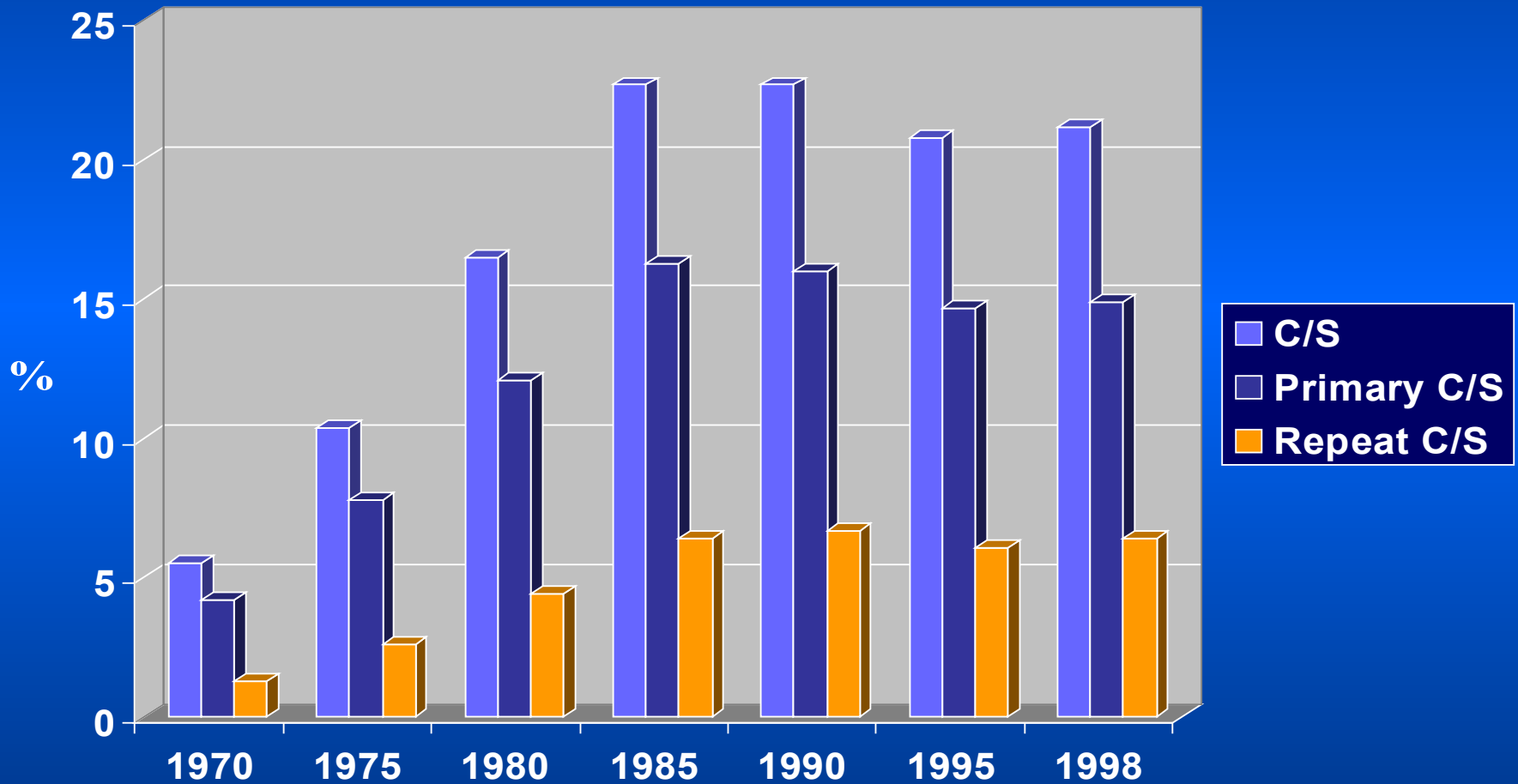


# Loss of Pregnant Women's Lives

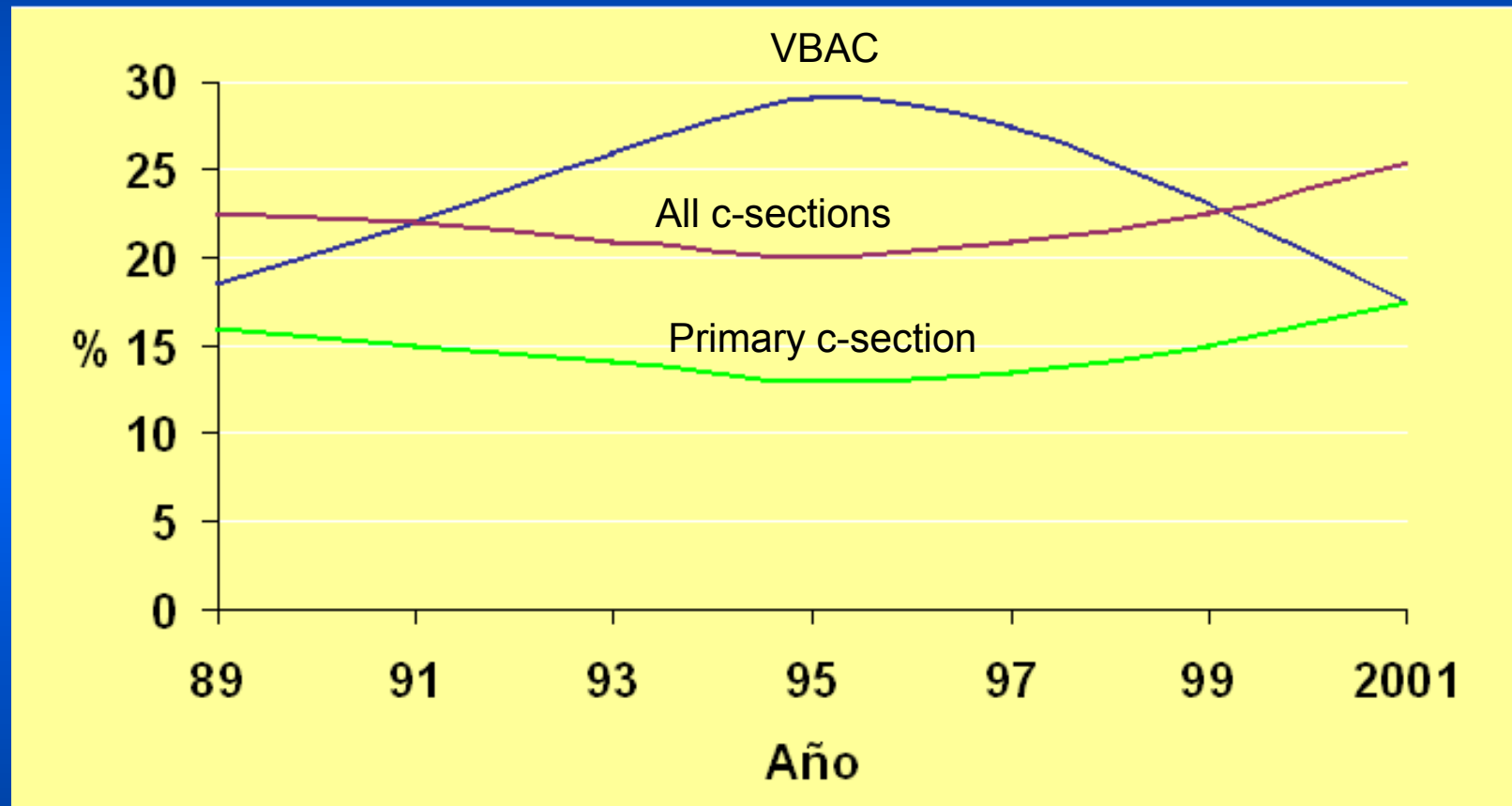
**4 loaded 747s everyday !!**



# Cesarean Delivery: The Epidemic



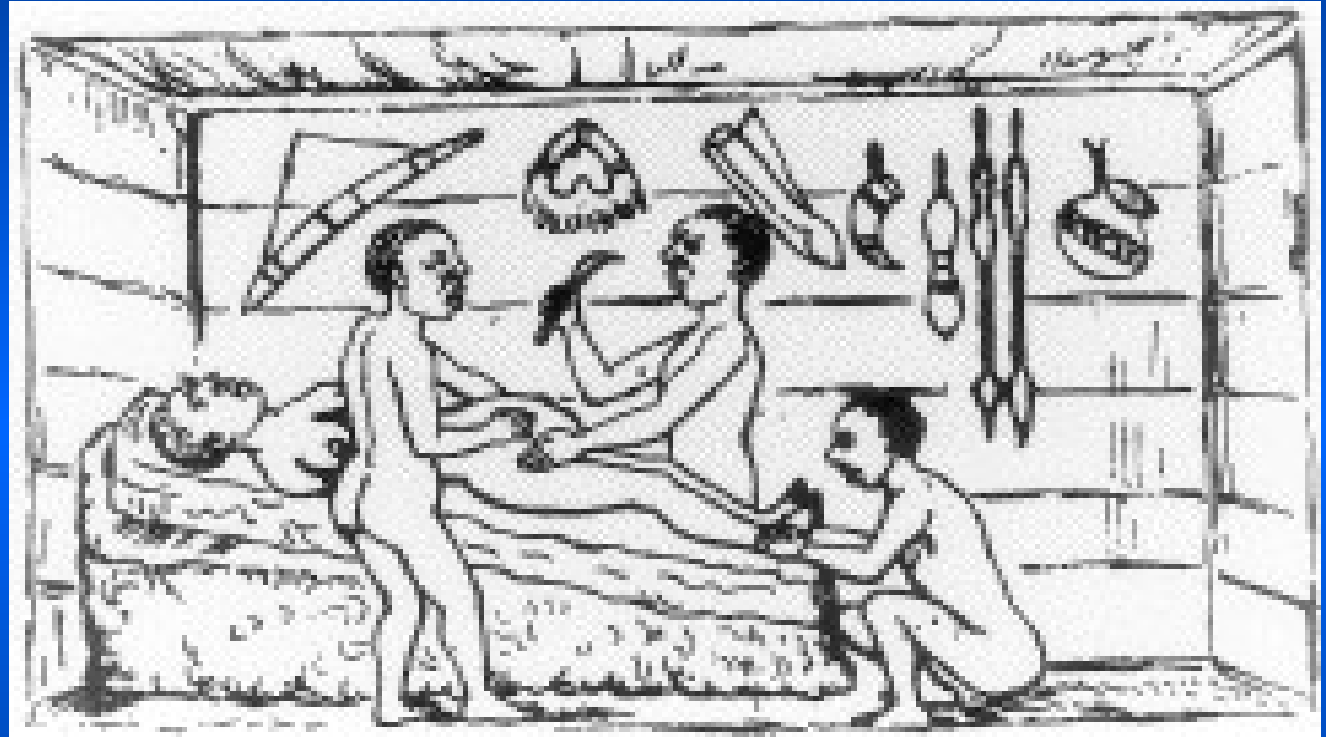
## Frequency of cesarean section, primary cesarean and vaginal birth post-c-section between 1989 - 2001



Martin JA, et al., National Center for Health Statistics. 2002



# UNNECESSARY c. s.



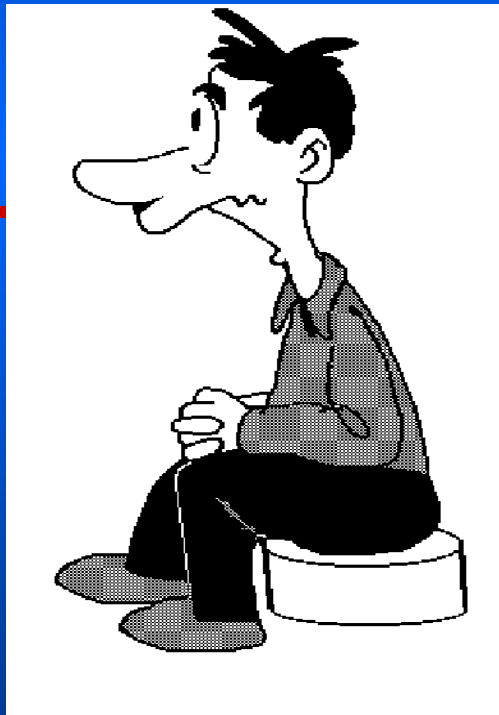
**‘REDUCE THE QUANTITY  
IMPROVE THE QUALITY’**



● **HOW MANY  
C.S.  
ARE DONE  
IN INDIA ?**

# HQH-BELLARY

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● 8% in 1980  
● 31% in 2007

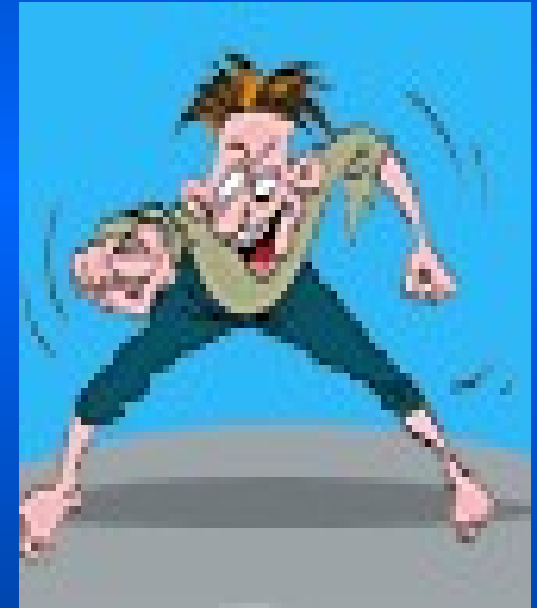
15%



# C.s. are here to stay

## Can we make them

## safer ?



**WHO's 'Safe Surgery Saves Lives' initiative came out with a 24-point checklist on 25-06-2008**

# Trends in Birth:

## A Transformation of Expectations

- Pre- 20th Century

*“The mother is the primary patient ”*

Death of both

Death of mother

- 20th Century

*“The fetus becomes the primary patient once labor commences”*

Death of child

Injury to child

### Current Trend 21<sup>st</sup> Century

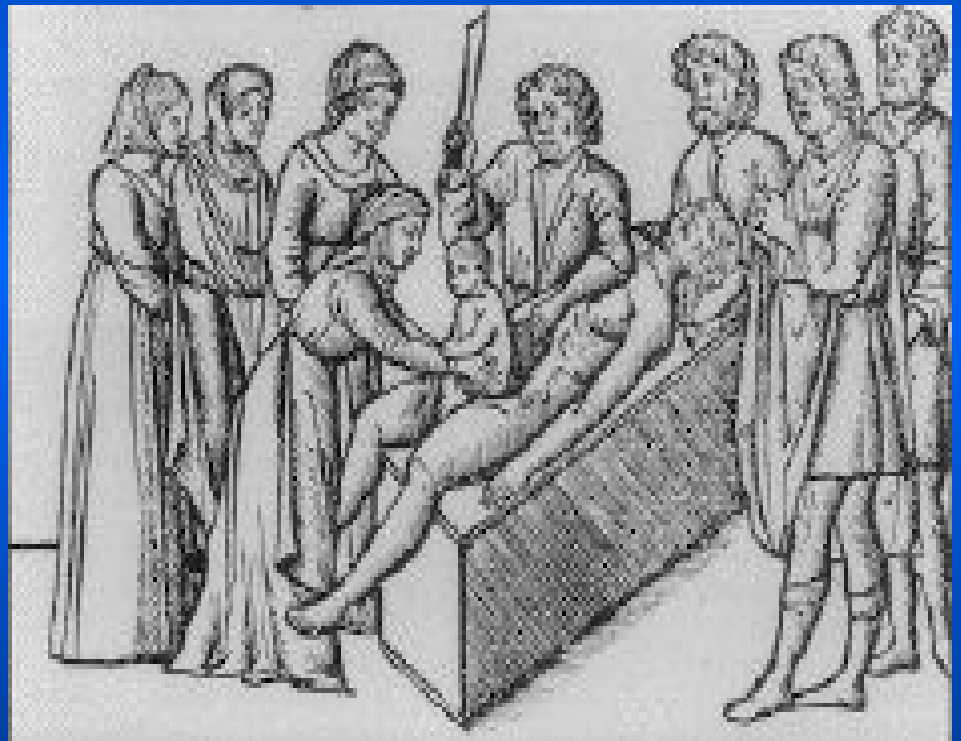
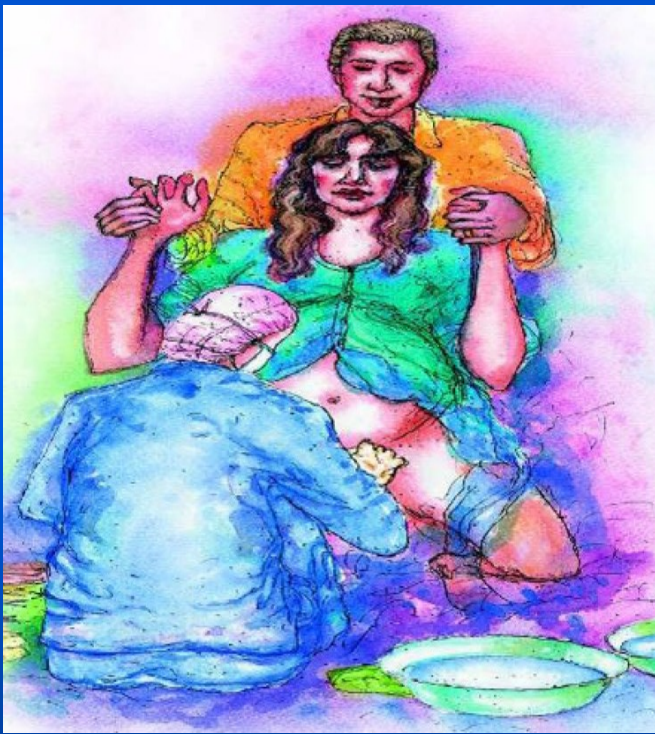
*“Perfect outcomes”*

Avoid and injury to mother and child

Adapted from Cesarean Section- A Brief History. ACOG & NIH. 1993

<http://www.nlm.nih.gov/exhibition/cesarean>

# '8' hours Vs '8' minutes





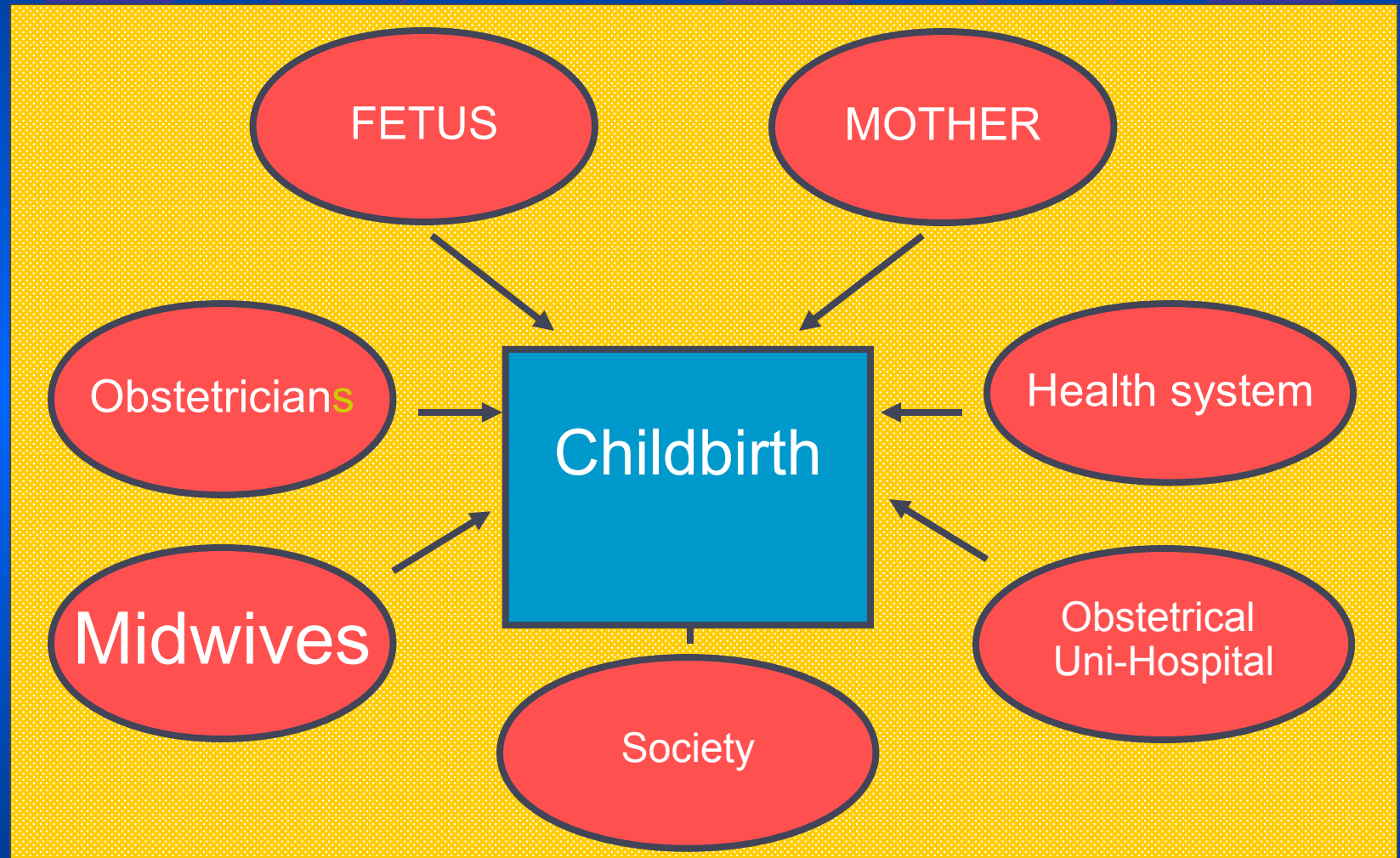
# 'Delivery 2020'

easy normal delivery or

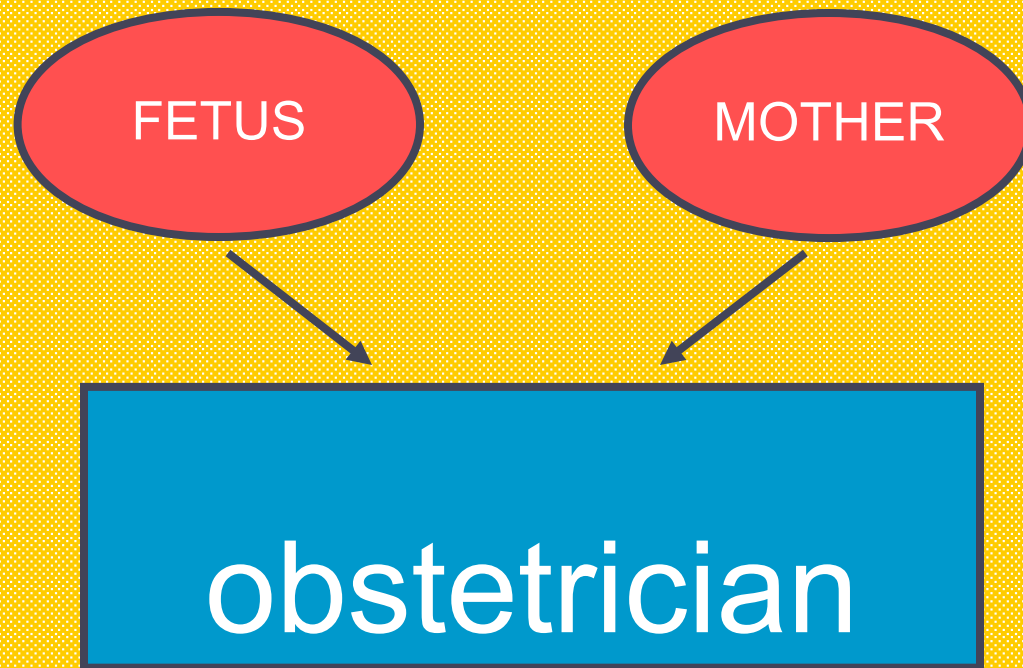
**S. C. S.**



# Who are involved in delivery ?



# Who are involved ?

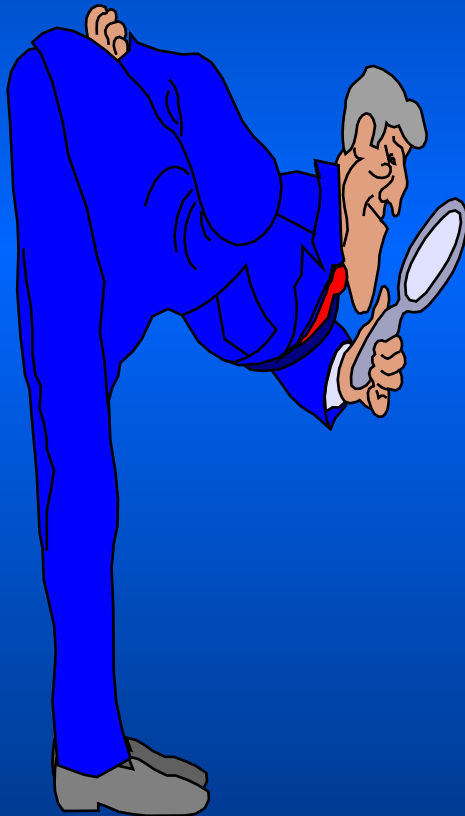


# OBSTETRICIAN...

## MORTALITY AND MORBIDITY...



# Know your patient



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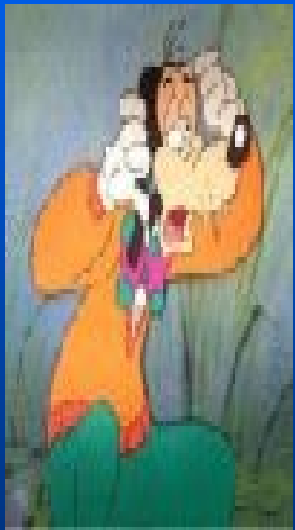
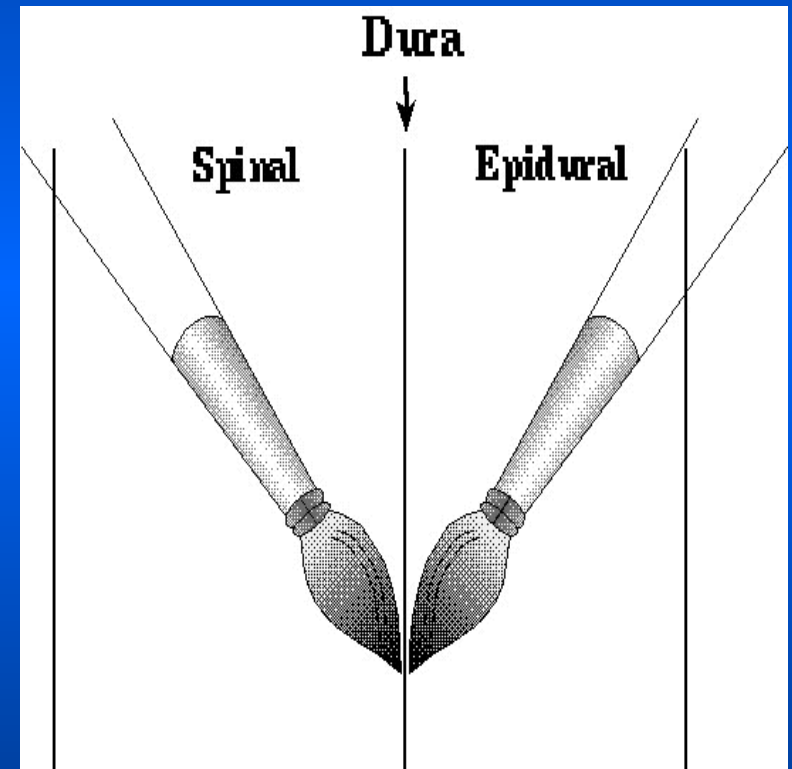
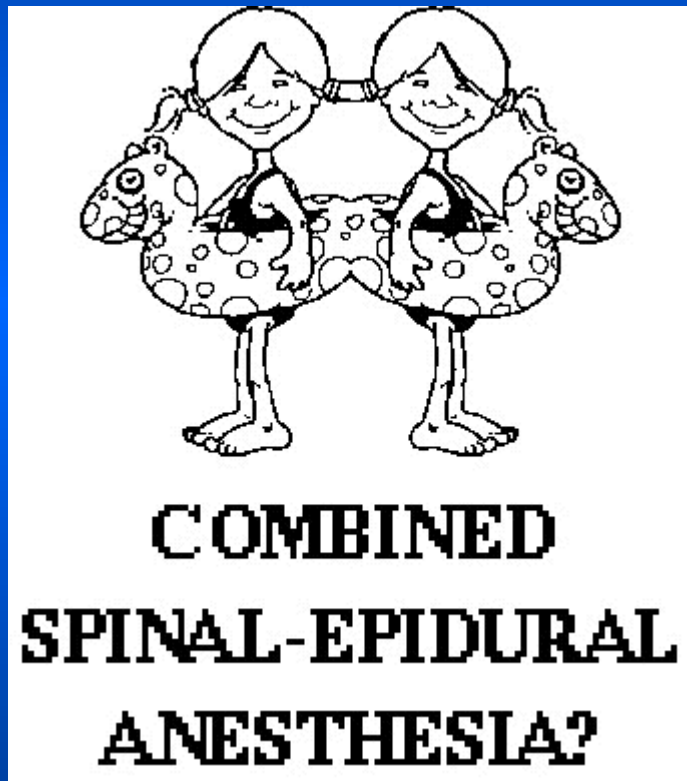
# ANAESTHESIA

- Decreased use of General Anesthesia
  - Decreased maternal death rates
- Spinal Anesthesia may provide superior anesthesia as compared to Epidural Anesthesia
  - Anecdotal Reports
- Epidural Opioids provide longer latency and less side effects than IT opioids
  - Epidural opioids typically not given until after delivery of neonate

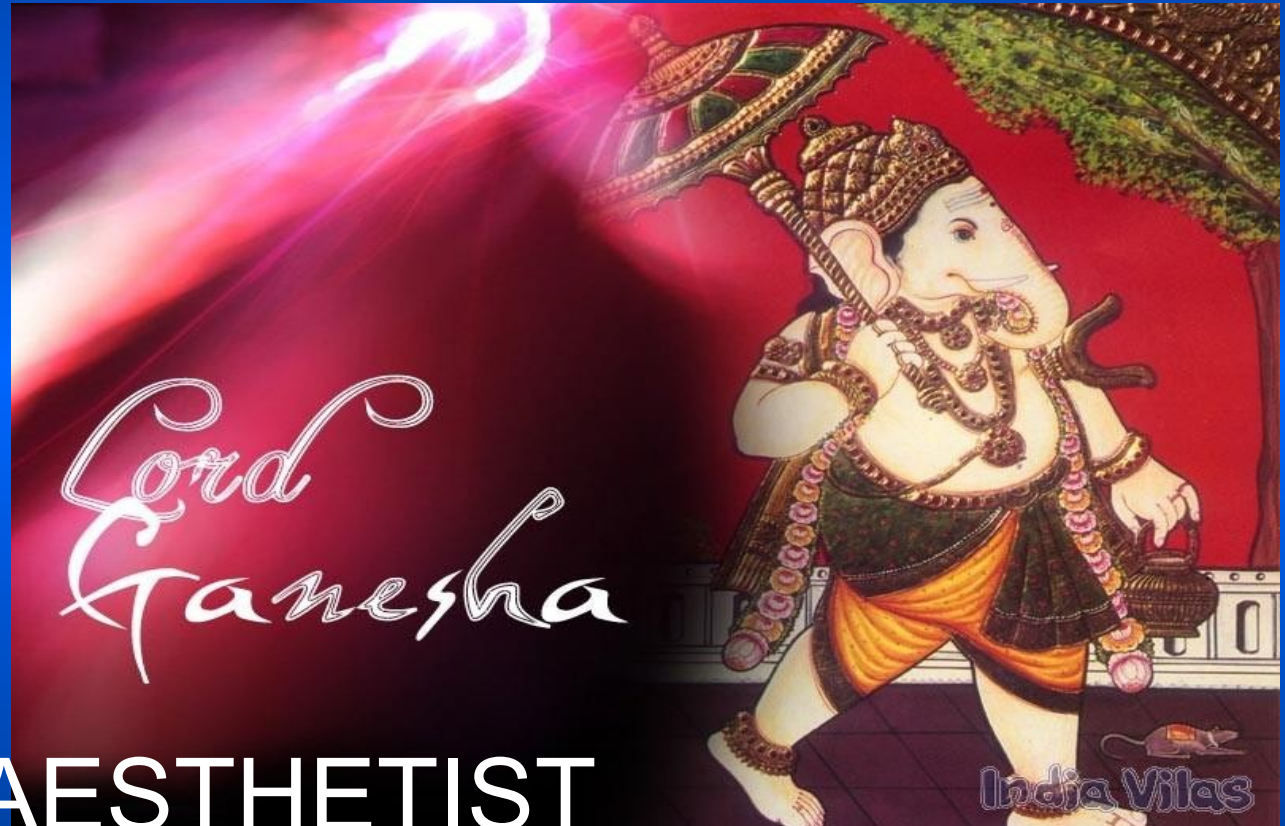
## CSE Technique becoming standard in many clinical practices

- “Best of both worlds”
- Higher success rates for epidural placement

# Best of both worlds



GOOD ANAESTHETIST.....  
BEST ANAESTHESIA....!!!!



ONE ANAESTHETIST  
IN **TIME**..... PLEASE.....!

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# ANAESTHETIST

- 'MANDATORY '

- NO SURGERY

WITHOUT ANAESTHETIST

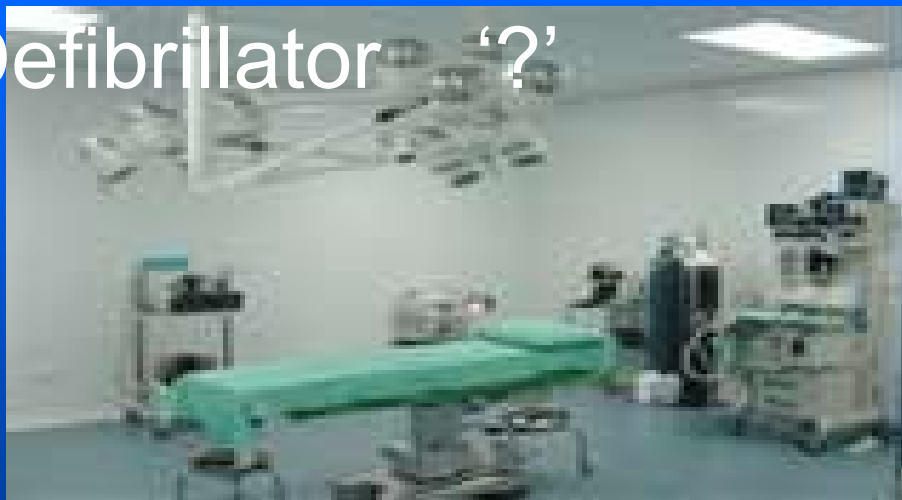
'DOCUMENT HIS PRESENCE'

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# O. T.

- A. Good Boyle's apparatus
- B. Multipara monitor
- C. Suction apparatus
- D. Defibrillator '??'





# Decorum of the O.T.



# Mobile phone in the O.T. ....!

- NO

- NO

- **NO.!**

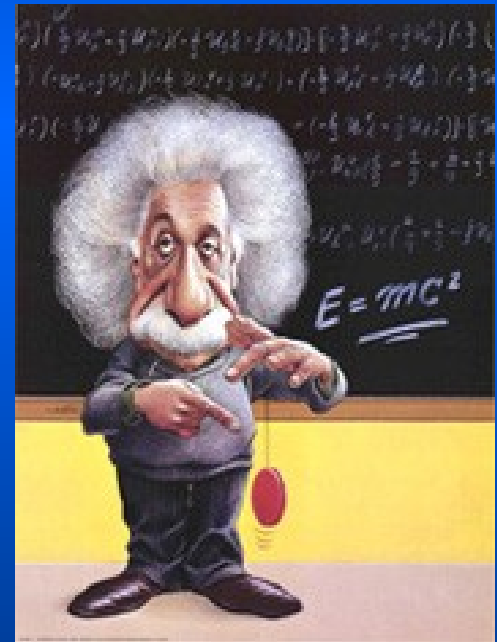


# NUMBER OF ASSISTANTS



# COUNT

- 1. WHEN THE INSTRUMENTS ARE AUTOCLAVED
- 2. ON THE TABLE
- **3. BEFORE CLOSING THE PERITONEUM**
- 4. AFTER THE SURGERY
- 5. BEFORE AUTOCLAVING



# INSTRUMENTS

on the table      in the bin

Allies forceps

4

2

Mosquitoes

4

2

Towel clips

4

Sponge holders

2

Medium sizes artery

Forceps for cord clamp

2

Scissors

2

MOP

1

1



# SKIN INCISION

Horizontal incision



Vertical incision



AD



# SKIN INCISION

Horizontal incision



Vertical incision



**“ A FRIEND  
IN NEED IS A  
FRIEND  
INDEED”**

# ***'FATAL ATTRACTION'***

1 day after



1 year after

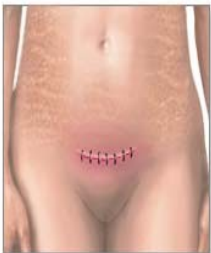


# HAUNTING 'BEE...'

- 1. BLEEDING
- 2. EXPOSURE
- 3. EXTRACTION

1 day after

1 year after



ADAM.

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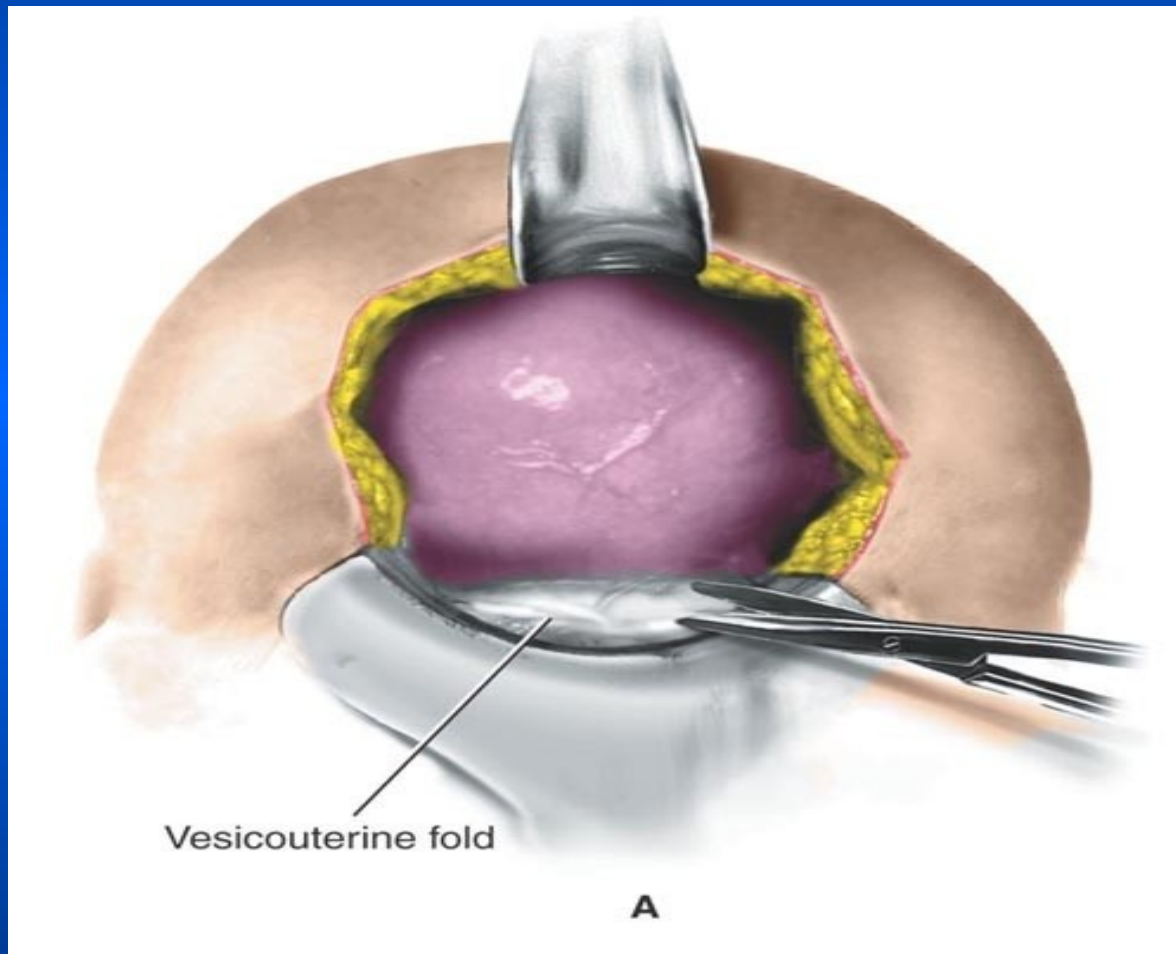
# C.S. SCAR-INDIA



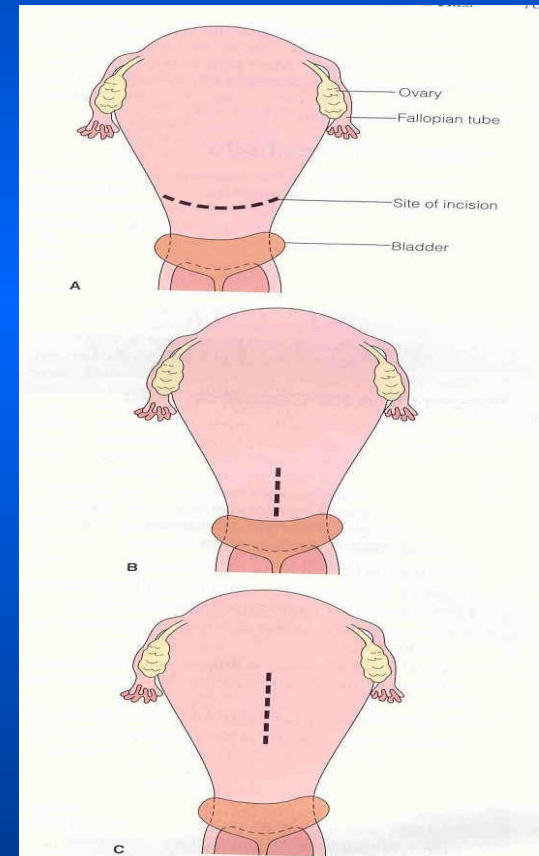
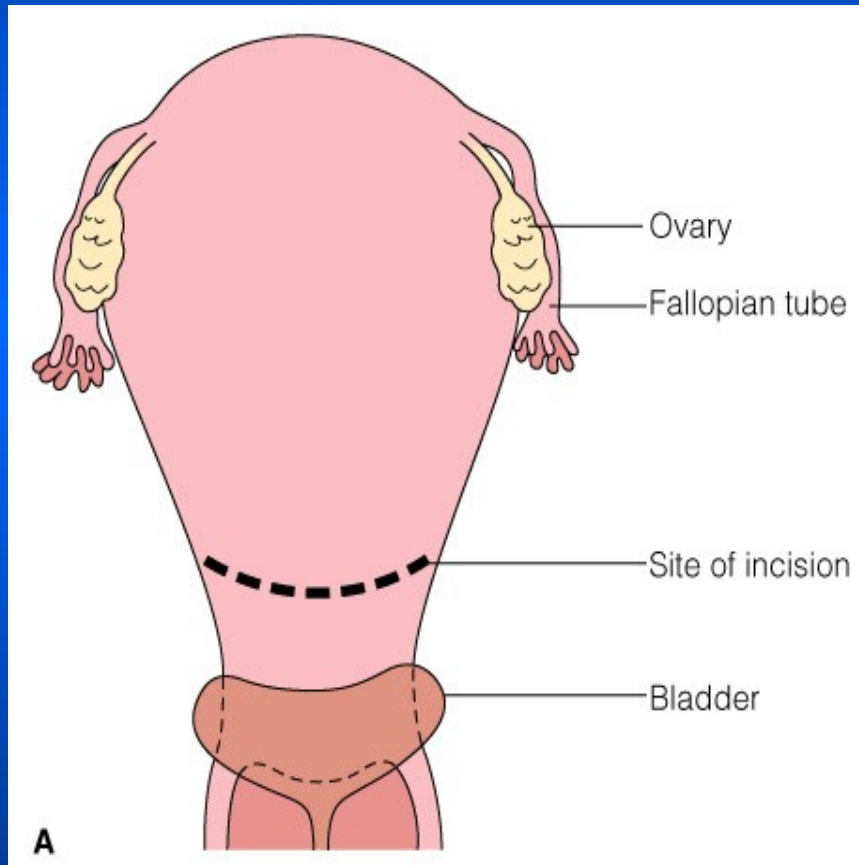
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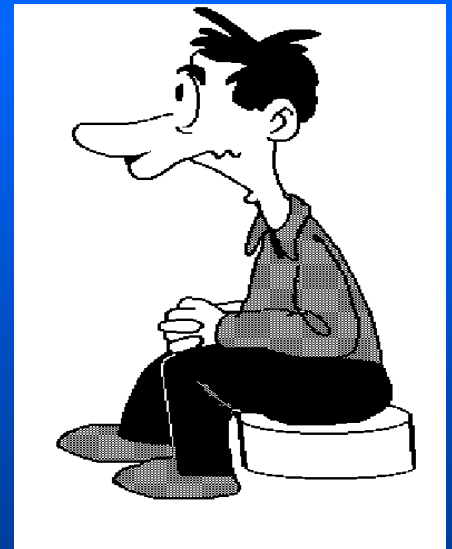
# UTERO-VESICAL FOLD



# UTERINE INCISIONS



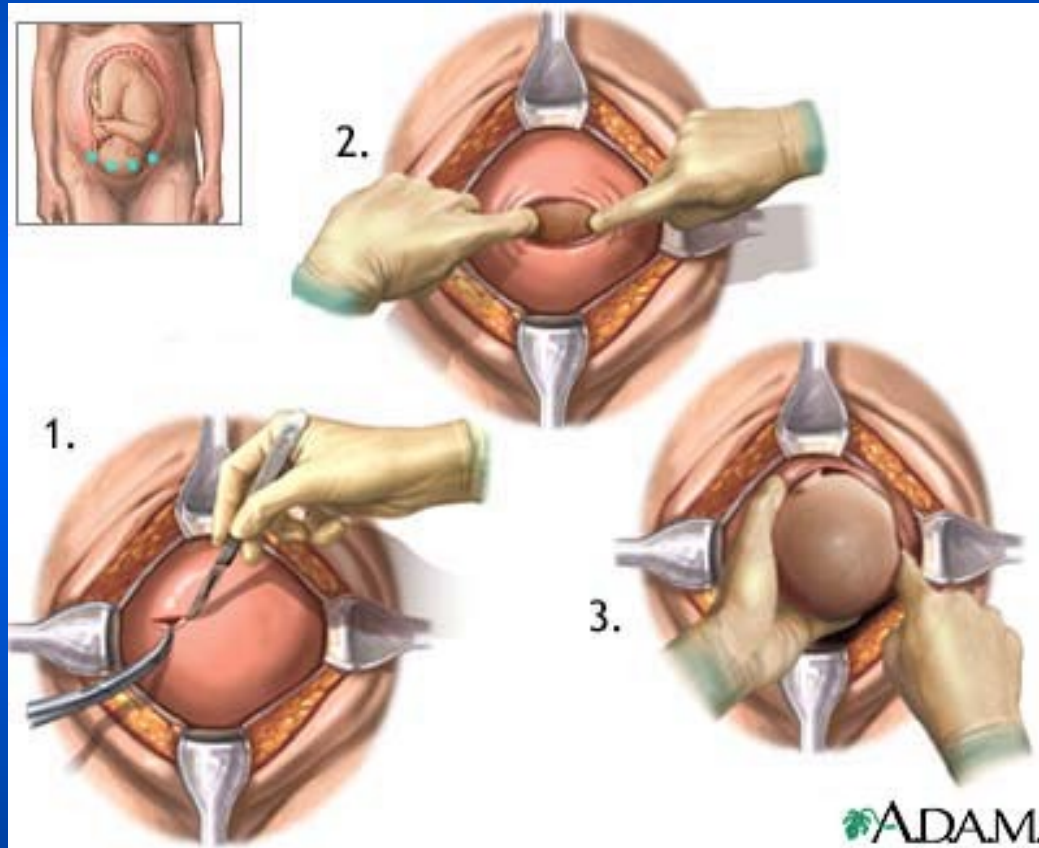
# FASHION CHANGES



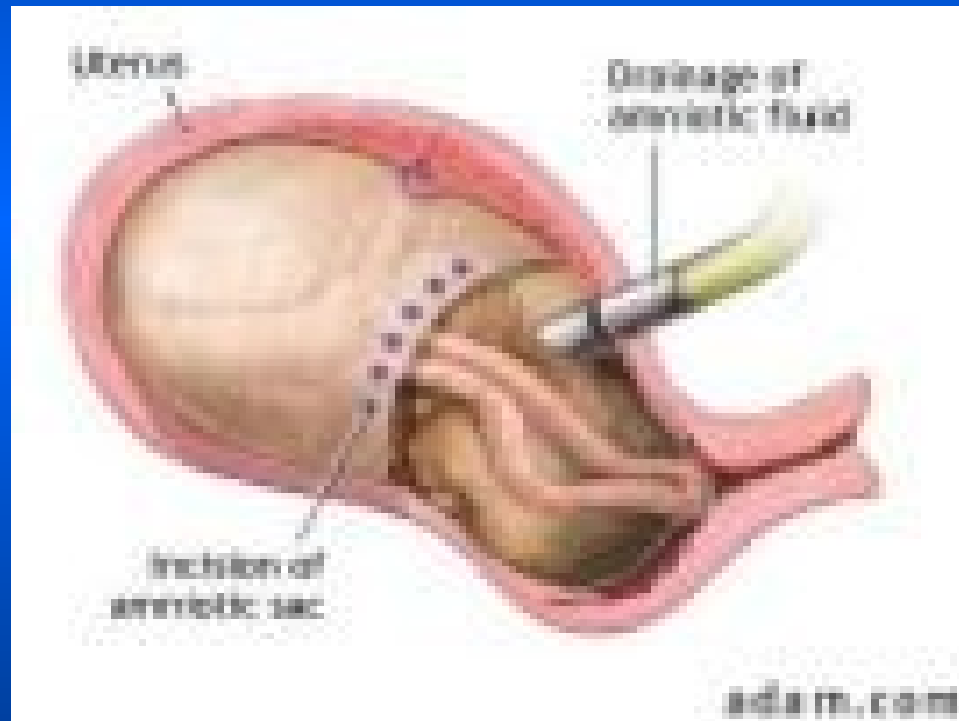
**AS LOW AS POSSIBLE ..NO**

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# UTERINE INCISION

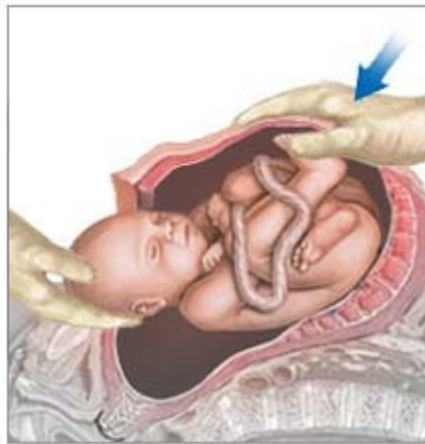


# AMNIOTIC SAC



# EXTRACTION OF FOETAL HEAD

Cesarean section

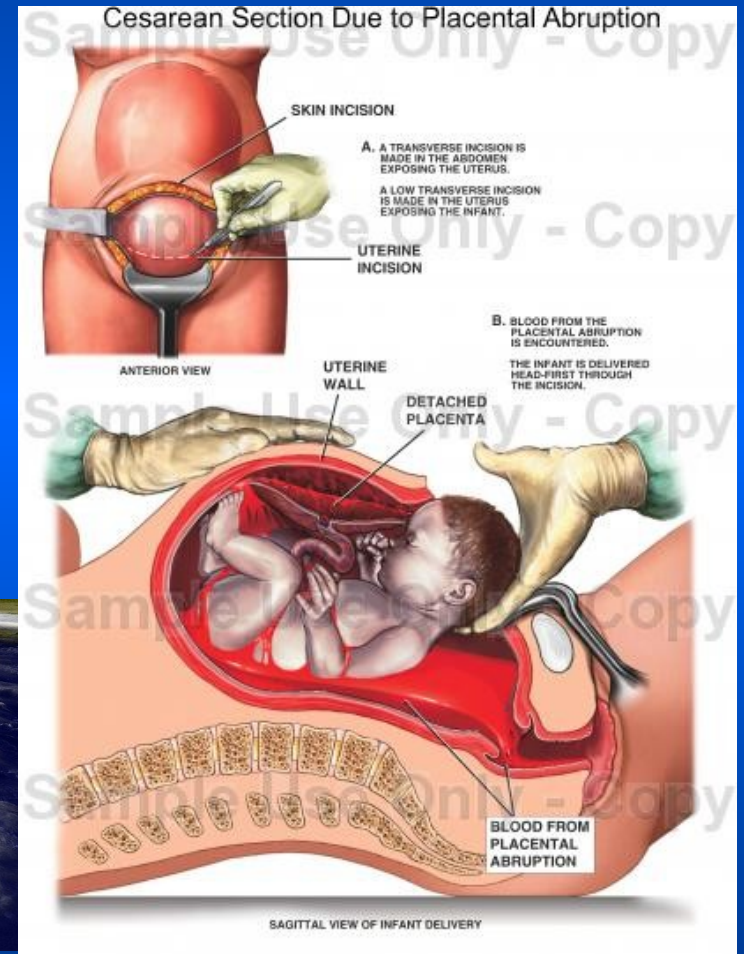


The surgeon reaches into the abdominal incision and lifts the baby's head as an assistant pushes down on the upper uterus

ADAM.



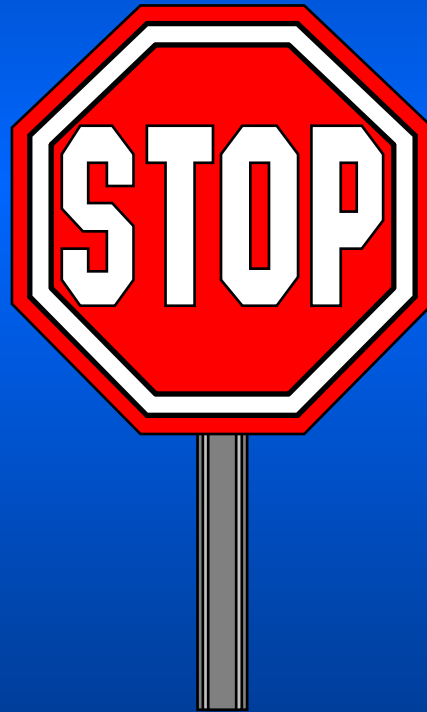
# BE COOOOL MAN.....





# EXTERIORISATION OF UTERUS

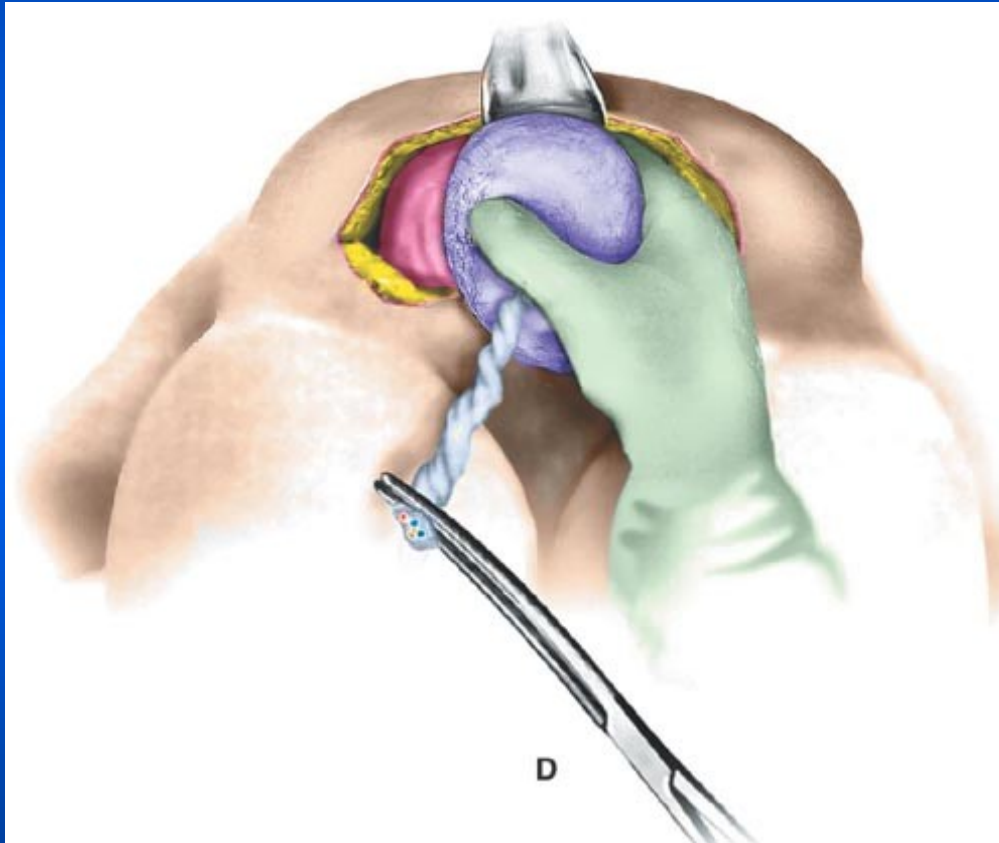
NO



**"Misgav Ladach" Cesarean Section**

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# NO MANUAL REMOVAL OF PLACENTA



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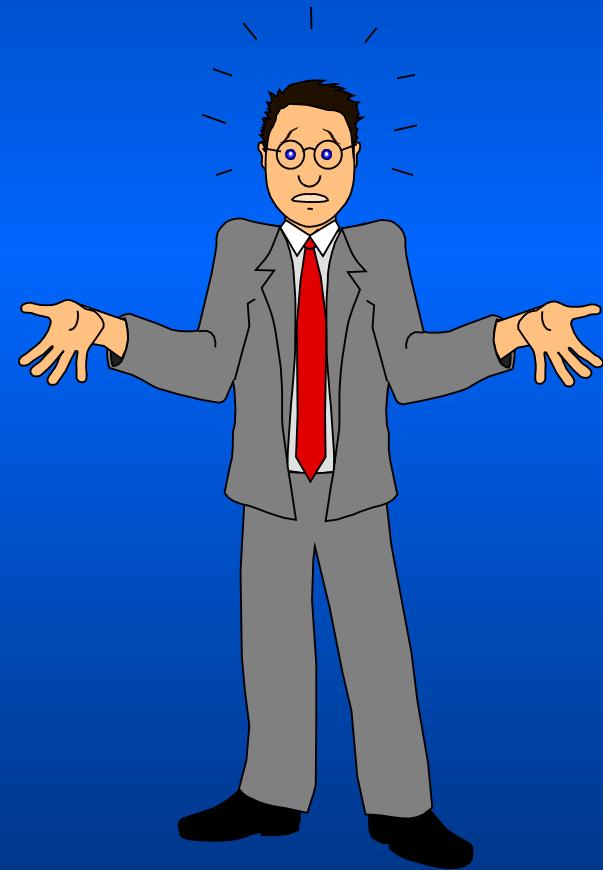


# 'SINGLE LAYER' OR 'DOUBLE LAYER' CLOSURE



- No sufficient data to recommend SINGLE LAYER.
- DOUBLE...SAFER
- VICRYL NO.1 1.1 m

# GUTTER CLEANING



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# SKIN CLOSURE

- 1. **mattress sutures with monofilament**

- 2. subcuticular

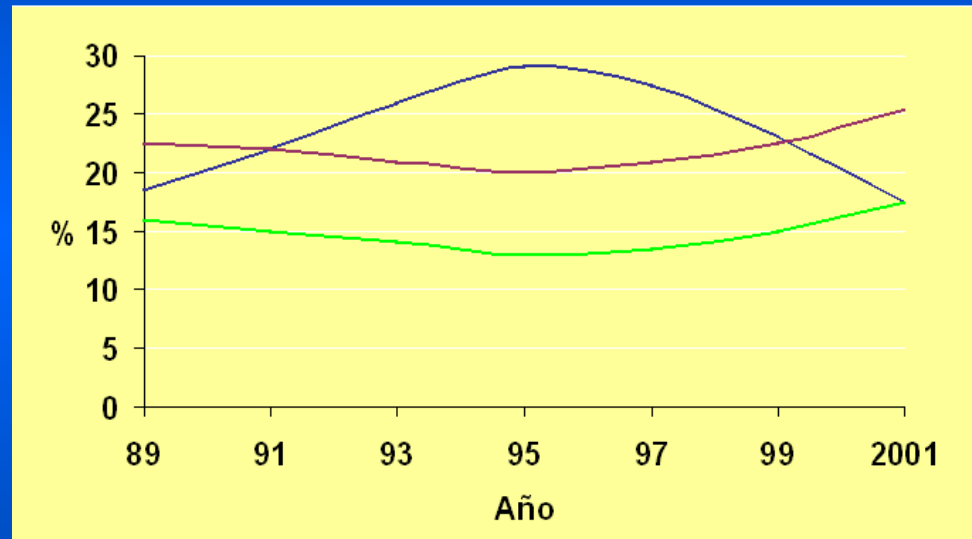
- 3. staplers



2 & 3 need perfect subcutaneous closure with ???

# PREVIOUS LSCS

- **ACCIDENTAL VBAC**



- **ELECTIVE REPEAT C.S.**



# What has changed?

**2001**

**Lydon-Rochelle M, et al**

**Risk of uterine rupture**

**during labor among women with a prior cesarean delivery.**

**N Engl J Med**

**2002**

**VBAC services start closing**

**2004**

**Landon, M. B et al. NICHD MFM Network**

**Maternal and Perinatal Outcomes Associated with a Trial of Labor after Prior Cesarean Delivery.**





# FACILITIES AND RESOURCES

- A trial of labour after Caesarean is always associated with a risk of **uterine rupture**, however small.
- For this reason, a TOL after Caesarean should only be considered **in a hospital** where provisions for performing an **immediate** Caesarean section are available.

# CATASTROPHIC COMPLICATIONS

## TOL-VBAC

- FACILITY FOR 'CRASH C.S.' - **IMPOSSIBLE**

'DECISION TO INCISION'  
INTERVAL OF  
30 minutes  
is **T0000** LATE



# Conservatism in Obstetrics

“No matter how carefully the uterine incision is sutured, we can never be certain that the cicatrized uterine wall will stand a subsequent pregnancy and labor without rupture. This means that the usual rule is

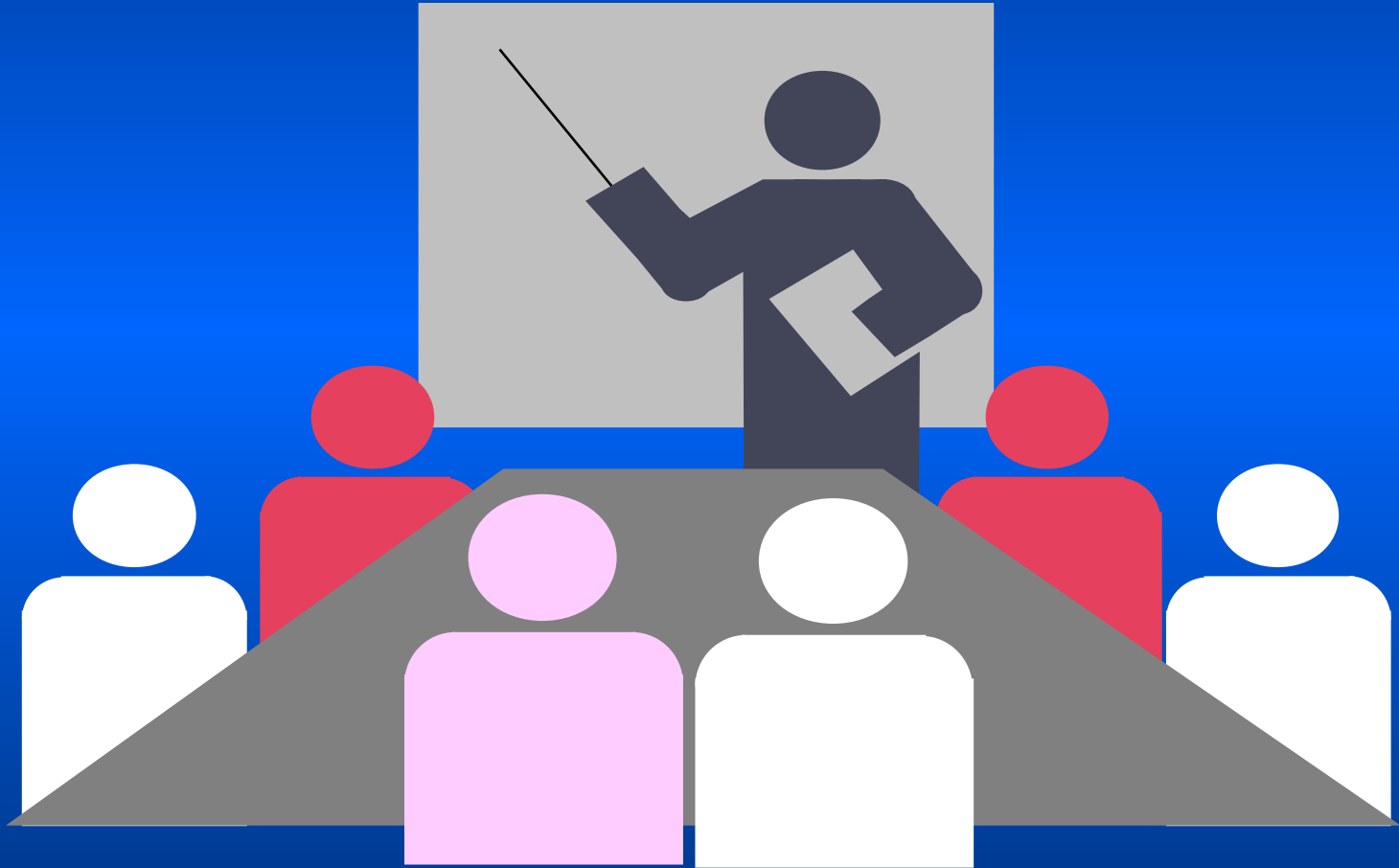
**once a cesarean, always a cesarean”**

Edwin Craigin, 1916

**CRAIGIN WAS  
RIGHT !!**

He was referring ONLY to  
classical cesarean scars !

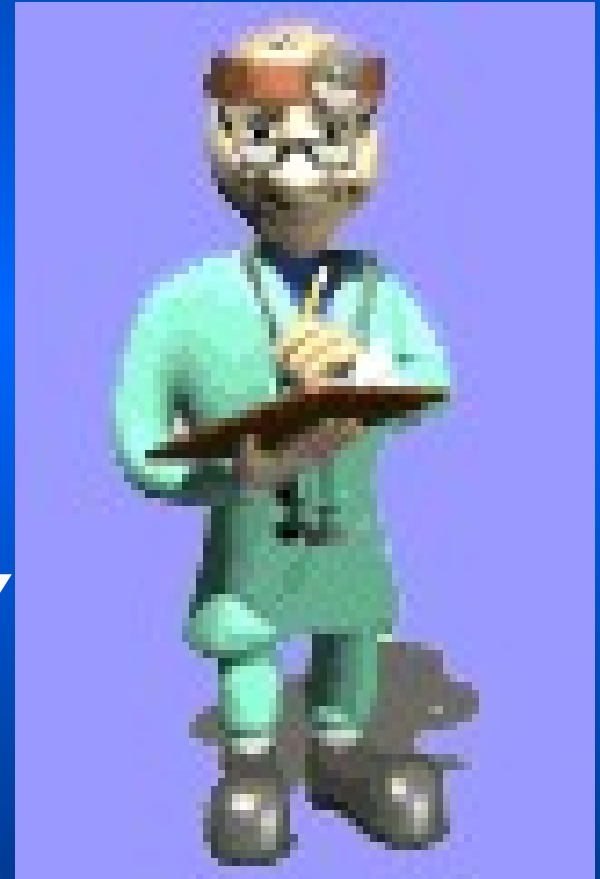
# C.S. TO BE DONE BY **POSTGRADUATES**



JOSHI SUYAJNA D.

THANK YOU  
FOR ALLOWING  
ME TO SHARE THIS  
WITH YOU TODAY

**Suyajna @ yahoo.com**






**WISDOM**  
**2008**

**12<sup>th</sup>, 13<sup>th</sup>,  
14<sup>th</sup>  
December  
2008**





**According to it, China conducted the highest number of surgeries followed by Russia and India. The study said nearly 3-16% of all inpatient surgical procedures in developed countries resulted in unnecessary complications with death rates being nearly 8%.**