

# The Surgical management of fibroids Using the Cochrane Database of Systematic Reviews

**endogynecology**  
Λαπαροσκοπικό Κέντρο Αθηνών

# Cochrane Review of GnRH

- Preoperative GnRH analogue therapy before hysterectomy or myomectomy for uterine fibroids
- 2009

# GnRH vs Placebo or No Treatment

- Preoperative Hb, Hct significantly increased
- Uterine volume, gestational uterine size and fibroid volume significantly reduced
- Pelvic symptoms and pelvic pain significantly reduced
- Dysmenorrhea significantly reduced

# GnRH vs Placebo or No Treatment

- Hot flushes, vaginitis, sweating, change in breast size, significantly more with GnRH (mainly 1 trial)
- Inconclusive regarding headaches (1 trial, wide CI)
- Withdrawal from treatment had different outcomes (total OR 2.47 CI 1.04-5.87)

# GnRH vs Placebo or No Treatment

- Reduced blood loss in hysterectomy and myomectomy
- Duration of surgery not significantly different in myomectomy, but shorter in hysterectomy
- Duration of hospital stay shorter for hysterectomy, same for myomectomy
- Blood transfusion were the same
- Vertical incision were less (myomectomies and hysterectomies)
- More chances of vaginal hysterectomy in the treatment group

# GnRH vs Placebo or No Treatment

- Fewer postoperative complications in hysterectomies, same in myomectomies

# Cochrane review - Adhesions

- Barrier agents for adhesion prevention after gynaecological surgery
- 2009
- Myomectomies (5), ovarian surgery (5), pelvic adhesions (4), endometriosis (1), mixed (1)
- Laparoscopy (6), laparotomy (10)



# Cochrane review - Adhesions

- Barrier adhesion prevention only analysed
- Interceed reduces adhesions (laparoscopy + laparotomy)
- Insufficient evidence regarding pregnancy rates
- Gore-Tex is superior (but needs suturing and removal)
- Seprefilm and Fibrin sheet have no effect



# Cochrane review – Haemorrhage prevention

- Interventions to reduce haemorrhage during myomectomy for fibroids
- 2009
- 10 RCTs
- 531 patients
- 6 laparotomy
- 3 laparoscopy
- 1 vaginal route

# Cochrane review – Haemorrhage prevention

- Vasopressin – intramyometrial (2)
- Oxytocin – intravenous (2)
- Misoprostol – vaginal (1)
- Tourniquet – pericervical (1)
- MESNA(sodium-2mercaptoethanate sulfonate)(1)
- Bupivacaine/epinephrine – intramyometrial (1)
- Tranexamic acid – intravenous (1)
- Morcellation – in situ (1)

# Cochrane review – Haemorrhage prevention

## OXYTOCIN

- 15 IU/125 cm<sup>3</sup> NaCl over 30 mins at the start of uterine incision
- 15 IU/1000 ml NaCl @ 40mU/min
- 2 RCTs – 154 patients
- Blood loss, transfusion, duration of surgery, postoperative complications were the same
- Hospital stay was marginally less (MD 0.60 days CI - 1.19 to -0.01)

# Cochrane review – Haemorrhage prevention

## MISOPROSTOL

- 400 mcg intravaginally 1 hour before the start of the operation
- 1 RCT – 25 patients
- Reduced blood loss (MD -149ml(-229.24 to -68.78), duration of surgery (MD -9.50 mins)
- Increased postoperative Hb (MD 0.80g/dl)
- Same transfusion, hospital stay, fever

# Cochrane review – Haemorrhage prevention

## TRANEXAMIC

- 10mg/kg(1gr max) 15 mins before incision and continuous infusion 1 mg/kg/hour in NaCl for 10 hours
- 1 RCT – 100 patients
- Reduced blood loss (MD -243ml), shortened hospital stay (MD -11mins)
- Same blood transfusion, postop Hb/Hct

# Cochrane review – Haemorrhage prevention

## VASOPRESSIN(and analogues)

- 5 IU in 100ml NaCl @ 2-3 sites @ base of myomas prior to incision
- 2 RCTs – 58 patients
- Less blood loss (MD -298 ml) (heterogeneity)
- Same blood transfusion(1), duration of surgery(1), hospital stay (1), postop adhesions (1), occurrence of pregnancy<sub>12/12</sub> after (1)

# Cochrane review – Haemorrhage prevention

## BUPIVACAINE/ADRENALINE

- 50 ml 0.25% bupivacaine + 0.5 ml epinephrine in serosa/myometrium before incision
- 1 RCT – 60 patients
- Reduced blood loss (MD -68.60ml) , duration of surgery (MD 30.50 mins)



# Cochrane review – Haemorrhage prevention MESNA

- 1 RCT – 58 patients
- Reduced duration of surgery (MD 20mins), hospital stay (MD 1day)
- Increased postop Hb/Hct
- Same fever

# Cochrane review – Haemorrhage prevention

## TOURNIQUET

- Uterine and ovarian artery occlusion
- 1 RCT – 28 patients
- Reduced blood loss (**MD -1870 ml**) and blood transfusion
- **Same operating time**
- **Above indicate Probable inexperience with myomectomies**

# Cochrane review – Haemorrhage prevention

## MORECELLATION IN SITU

- 1 RCT – 48 patients
- Reduced operating time (MD -25.30mins)
- Same blood loss, hospital stay

# Cochrane review – Haemorrhage prevention

- Limited RCTs
- **HELPFUL** misoprostol, vasopressin, bupivacaine/adrenaline, TXA
- Cochrane suggests tourniquet but results are suspicious
- MESNA not commonly available
- **NOT HELPFUL** oxytocin, in situ morcellation

## Other recommendations

### Best Practice and Research Clinical Obstetrics and Gynaecology 2008 Conventional myomectomy

- Pre-intraoperative antibiotics (cef+met)
- Bowel preparation – no evidence but consider in repeat myomectomy due to high incidence of adhesions
- Consider thromboprophylaxis
- Consider opening uterine wall with energy
- Meticulous haemostasis, irrigation with saline, consider a drain

# Suggested Protocol

- Consider preoperative **GnRH** if considerable anaemia or very large fibroid
- Consider **misoprostol** 400mcg 1 hour before operation, if not contraindicated
- Consider intraoperative single dose **antibiotics**
- Consider **tranexamic** acid with the start of the operation at a dose of 10mg/kg(1gr max) and continuous infusion 1 mg/kg/hour in NaCl for 10 hours, if not contraindicated
- Consider **vasopressin** 5-10IU in 100ml NaCl intrauterine **OR** 50 ml 0.25% **bupivacaine** + **epinephrine** 0.5 ml in serosa/myometrium
- Consider **single incision** and prefer **anterior incisions**
- Use diathermy to enucleate fibroid
- Consider a drain in certain cases
- Consider adhesion barrier **Interseed**