Tubal sterilisation

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Tubal sterilisation

- The ideal female sterilisation would involve:
  - simple, easy learned, one-time procedure
  - could be done under local anaesthesia
  - technique with minimal tubal damage
  - safe procedure, high efficacy, readily accessible and personally and culturally acceptable
  - low cost

    - WHO 1994

Tubal sterilisation

- late 1800s
- 1930s Pomeroy method
- most widely used contraceptive method in the world today
- > 100 million women sterilised
  - WHO 1994

Tubal sterilisation

1. Minilaparotomy vs endoscopic techniques for tubal sterilisation

2. Techniques for the interruption of tubal patency

Minilaparotomy vs endoscopic techniques for tubal sterilisation

Kulier R, Boulvain M, Walker D, de Candolle G, Campana A.

In: The Cochrane Library, Issue 2, 2000.

Minilaparotomy and endoscopic techniques

- Outcomes:
  - major, minor morbidity
  - failure of surgical/anaesthetic approach
  - duration of operation
  - duration of hospital stay
  - complaints
  - women's perception

Minilaparotomy and endoscopic techniques

- Six trials
- minilaparotomy vs laparoscopy n=1911
  - Letchworth 1980, Meyer 1976, Sitompul 1984, Taner 1994, WHO A 1982
- minilaparotomy vs culdoscopy n=395
  - Sitompul 1984, WHO B 1982
- laparoscopy vs culdoscopy n=295
  - Sitompul 1984

Minilaparotomy and endoscopic techniques

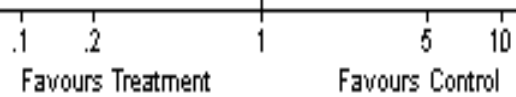
- experienced surgeons
- general, local, regional anaesthesia
- industrialised/non-industrialised centres
- follow-up maximum one year

Minilaparotomy vs laparoscopy: Minor morbidity

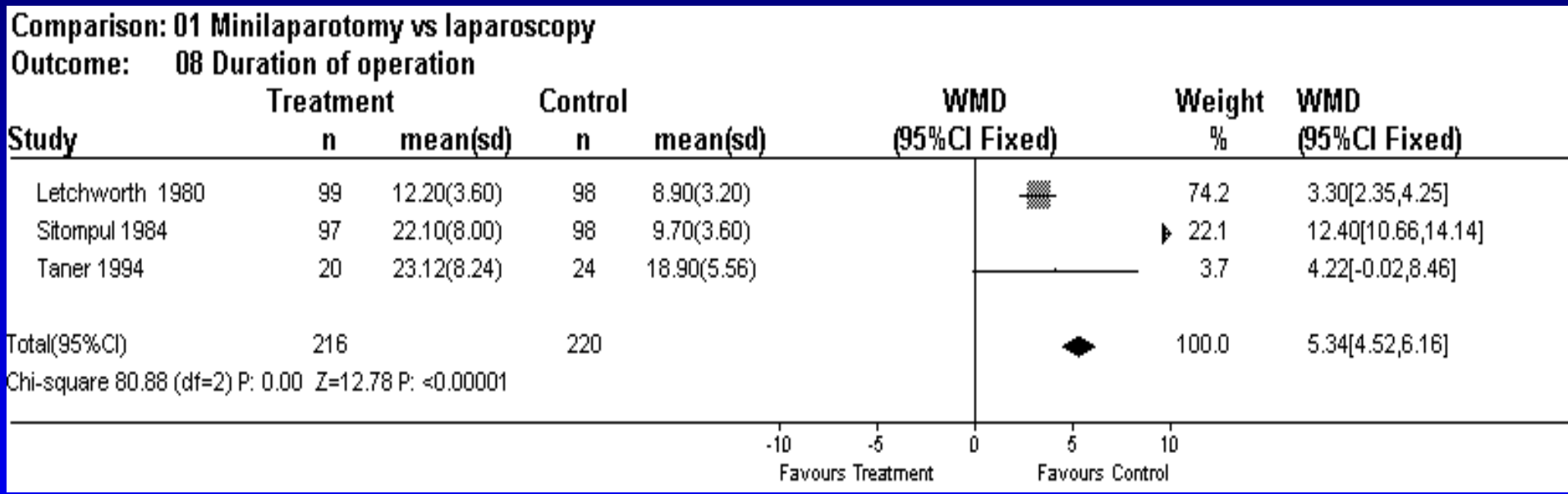
Comparison: 01 Minilaparotomy vs laparoscopy
Outcome: 04 Minor morbidity (total)

Study	Treatment n/N	Control n/N	Peto OR (95%CI Fixed)	Weight %	Peto OR (95%CI Fixed)
Letchworth 1980	5 / 99	3 / 98		4.9	1.66[0.41,6.82]
Meyer 1976	2 / 30	1 / 30		1.9	1.99[0.20,19.94]
Sitompul 1984	5 / 97	2 / 98		4.3	2.45[0.54,11.03]
Taner 1994	0 / 20	1 / 24		0.6	0.16[0.00,8.19]
WHO A 1982	97 / 791	55 / 819		88.2	1.91[1.37,2.67]
Total(95%CI)	109 / 1037	62 / 1069		100.0	1.89[1.38,2.59]

Chi-square 1.66 (df=4) P: 0.89 Z=3.98 P: 0.00007



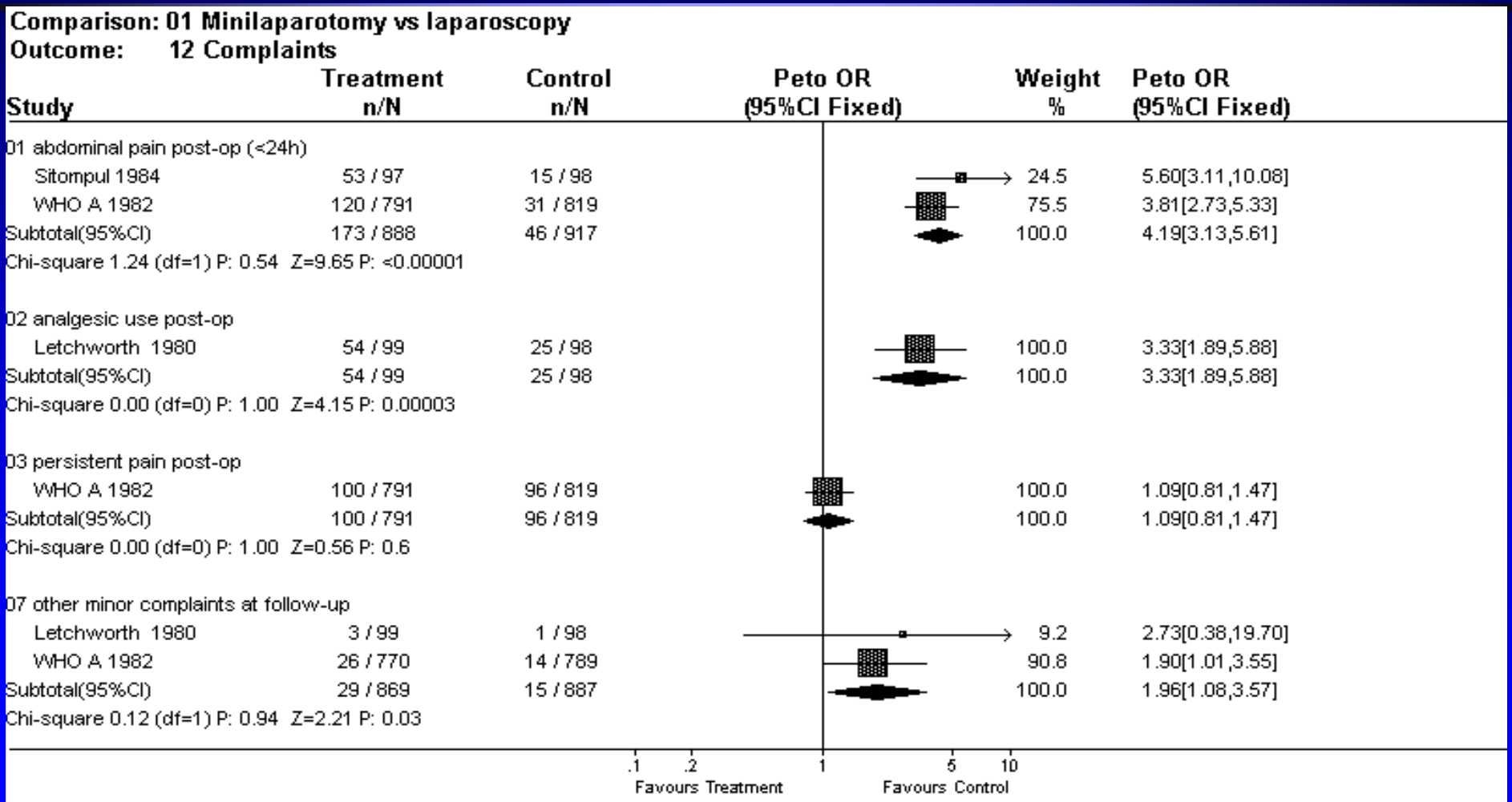
Minilaparotomy vs laparoscopy: Operating time



Minilaparotomy vs laparoscopy: Complaints

Comparison: 01 Minilaparotomy vs laparoscopy
Outcome: 12 Complaints

Study	Treatment n/N	Control n/N	Peto OR (95%CI Fixed)	Weight %	Peto OR (95%CI Fixed)
01 abdominal pain post-op (<24h)					
Sitompul 1984	53 / 97	15 / 98		24.5	5.60[3.11,10.08]
WHO A 1982	120 / 791	31 / 819		75.5	3.81[2.73,5.33]
Subtotal(95%CI)	173 / 888	46 / 917		100.0	4.19[3.13,5.61]
Chi-square 1.24 (df=1) P: 0.54 Z=9.65 P: <0.00001					
02 analgesic use post-op					
Letchworth 1980	54 / 99	25 / 98		100.0	3.33[1.89,5.88]
Subtotal(95%CI)	54 / 99	25 / 98		100.0	3.33[1.89,5.88]
Chi-square 0.00 (df=0) P: 1.00 Z=4.15 P: 0.00003					
03 persistent pain post-op					
WHO A 1982	100 / 791	96 / 819		100.0	1.09[0.81,1.47]
Subtotal(95%CI)	100 / 791	96 / 819		100.0	1.09[0.81,1.47]
Chi-square 0.00 (df=0) P: 1.00 Z=0.56 P: 0.6					
07 other minor complaints at follow-up					
Letchworth 1980	3 / 99	1 / 98		9.2	2.73[0.38,19.70]
WHO A 1982	26 / 770	14 / 789		90.8	1.90[1.01,3.55]
Subtotal(95%CI)	29 / 869	15 / 887		100.0	1.96[1.08,3.57]
Chi-square 0.12 (df=1) P: 0.94 Z=2.21 P: 0.03					



Minilaparotomy vs laparoscopy

- Similar:
  - major morbidity
  - surgical, anaesthetic failure
- Limitations: follow-up (max 1 year)

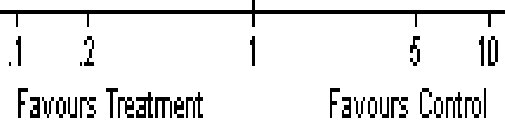
Laparoscopy vs culdoscopy

Comparison: 03 Laparoscopy vs culdoscopy

Outcome: 04 Minor morbidity (total)

Study	Treatment n/N	Control n/N	Peto OR (95%CI Fixed)	Weight %	Peto OR (95%CI Fixed)
Sitompul 1984	1 / 98	8 / 100		100.0	0.20[0.05,0.77]
Total(95%CI)	1 / 98	8 / 100		100.0	0.20[0.05,0.77]

Chi-square 0.00 (df=0) P: 1.00 Z=-2.35 P: 0.02



Laparoscopy vs culdoscopy

Comparison: 03 Laparoscopy vs culdoscopy

Outcome: 08 Hospital stay >24 hours

Study	Treatment n/N	Control n/N	Peto OR (95%CI Fixed)	Weight %	Peto OR (95%CI Fixed)
Sitompul 1984	1 / 98	8 / 100		100.0	0.20[0.05,0.77]
Total(95%CI)	1 / 98	8 / 100		100.0	0.20[0.05,0.77]

Chi-square 0.00 (df=0) P: 1.00 Z=-2.35 P: 0.02

Laparoscopy: Complications

- Prospective follow-up study
- Laparoscopic procedures 25,764
- Complication 145 (5.7/1000)
- Laparotomy 84 (3.3/1000)
  - epigastric vessel, intestinal injury

Jansen 1997

Complications of laparoscopy

- risk factors:
  - previous laparotomy OR 3.73 (95%CI 1.39-9.99)
  - laparoscopic experience of the surgeon OR 3.85 (95% CI 1.69-8.75)

Sterilisation techniques

Kulier R, Nardin M, Boulvain M,
Peterson H, Campana A.

In: The Cochrane Library (in press)

Sterilisation techniques: outcomes

- failure rates
- safety
- technical failures
- changes in menstrual bleeding pattern
- complications
- operative time
- length of hospital stay

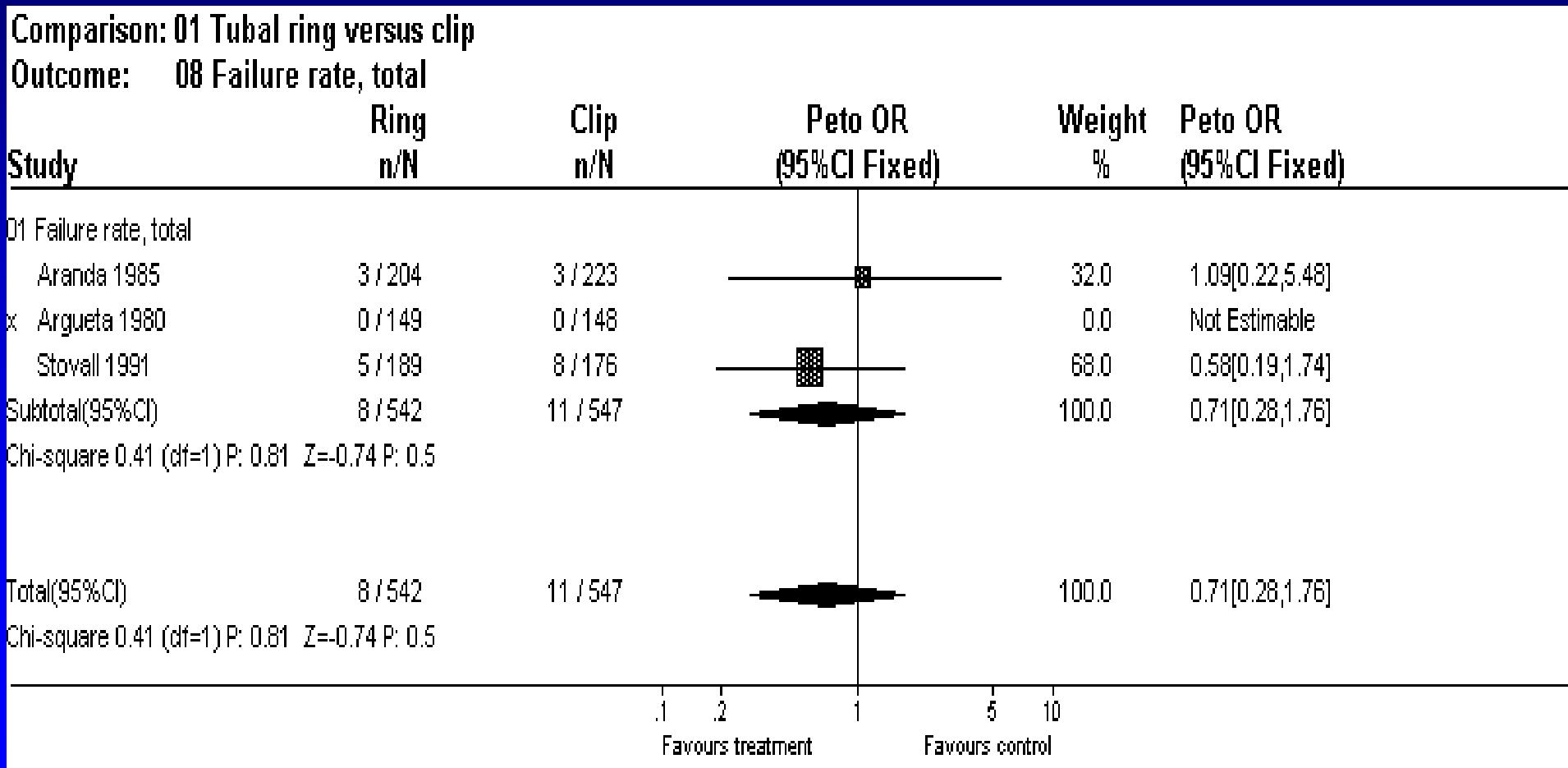
Sterilisation techniques

- 9 trials included
  - ring vs springclip n=1227
    - Aranda 1985, Argueta 1980, Stovall 1991
  - ring vs electrocoagulation n=599
    - Aranda 1976, Koetsawang 1978
  - Pomeroy vs electrocoagulation n=1910
    - Sitompul 1984,WHO 1982
  - Pomeroy vs Filshie clip n=200
    - Yan 1990
  - Hulka vs Filshie clip n=200
    - Toplis 1988

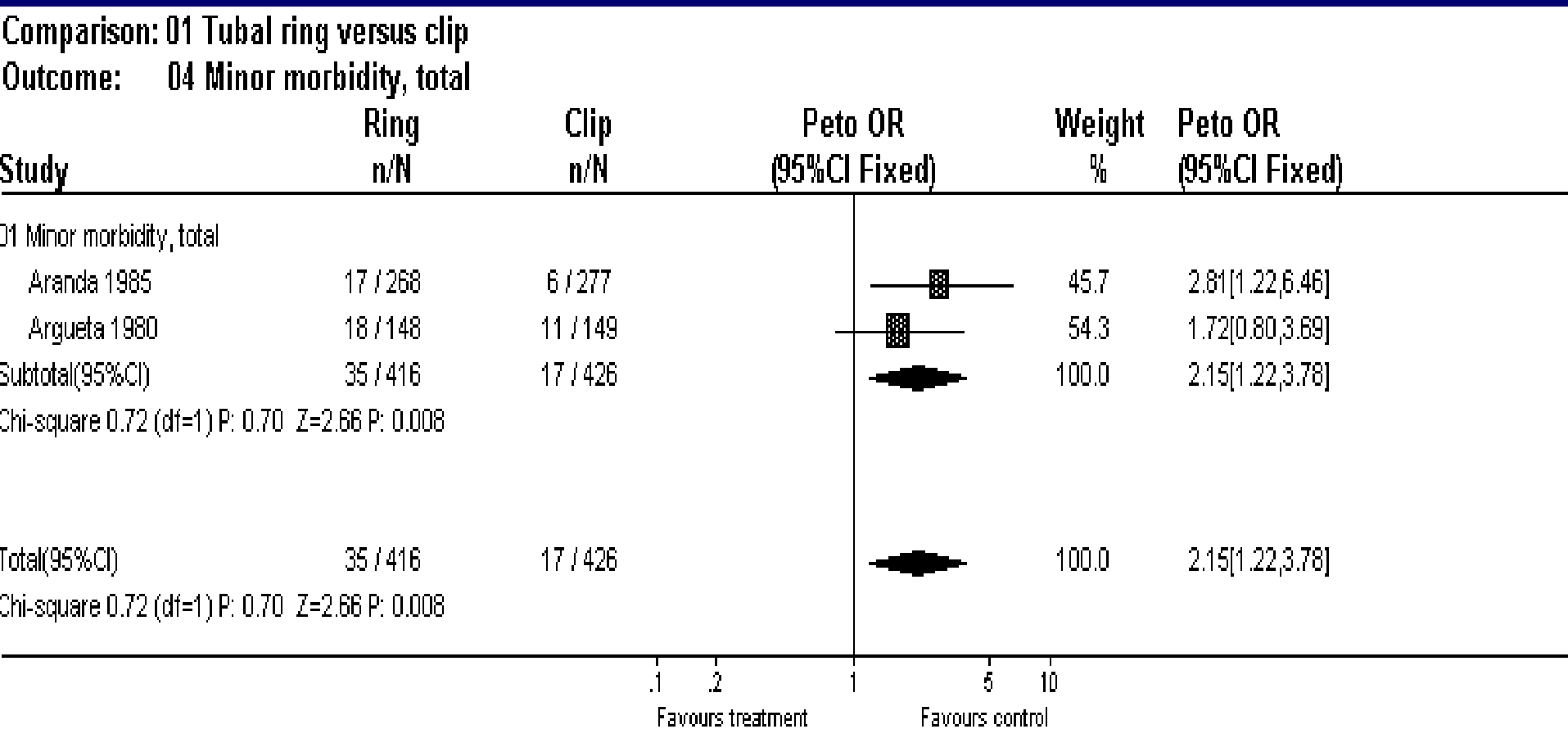
Sterilisation techniques

- Laparoscopy, minilaparotomy, culdoscopy
- experienced surgeons in all but 1
- mostly as interval procedures
- follow-up: 6 months to 2 years

Tubal ring vs clip: pregnancy



Tubal ring vs clip: minor morbidity



Tubal ring vs clip: technical failure