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Best Evidence from the Cochrane Library

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Copper Containing Intra-uterine Devices versus Depot Progestogens for Contraception

G Justus Hofmeyr, Mandisa Singata, Theresa A Lawrie

The study compared the contraceptive and non-contraceptive benefits and risks of using the copper-containing IUD versus depot progestogens for contraception.

Search Strategy
The following were searched: The Cochrane Pregnancy and Childbirth Group Trials Register, The Cochrane Central Register of Controlled Trials, Pubmed, Popline, Clinical Trials.gov, The Current Controlled Trials metaRegister, EMBASE and LILACS, and contacted study authors.

Selection Criteria
Randomized trials comparing women using copper-containing IUDs with women using depot progestogens.

Main Result
Overall, the copper IUD was more effective than depot progestogens/hormonal contraception at preventing pregnancy (risk ratio (RR) 0.45; 95% confidence interval (CI) 0.24 to 0.84). HIV disease progression was reduced in the IUD group (RR 0.58; 95% CI 0.39 to 0.87). There was no significant difference in pelvic inflammatory disease rates between the two groups. Discontinuation of the allocated method was less frequent with the IUD in one study, and less frequent with hormonal contraception in the other study (in which women were allowed to switch between various hormonal methods).

Conclusion
In the populations studied, the IUD was more effective than hormonal contraception in pregnancy prevention. High quality research is urgently needed to compare the effects, if any, of these two commonly used contraception methods on HIV acquisition/seroconversion and HIV/AIDS disease progression.

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Oxygen Therapy for Acute Myocardial Infarction

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Does the routine use of inhaled oxygen in acute myocardial infarction (AMI) improve patient-centered outcomes, in particular pain and death?

Search Strategy
Cochrane Central Register of Controlled Trials (CENTRAL) (The Cochrane Library), MEDLINE, MEDLINE In-Process, EMBASE, CINAHL, LILACS and PASCAL, British Library ZETOC, Web of Science ISI Proceedings. Experts were also contacted to identify any studies. No language restrictions were applied.

Selection Criteria
Randomised controlled trials of people with suspected or proven AMI, less than 24 hours after onset, in which the intervention was inhaled oxygen (at normal pressure) compared to air and regardless of co-therapies provided, these were the same in both arms of the trial.

Main Result
Three trials involving 387 patients were included and 14 deaths occurred. The pooled RR of death was 2.88 (95% CI 0.88 to 9.39) in an intention-to-treat analysis and 3.03 (95% CI 0.93 to 9.83) in patients with confirmed AMI. While suggestive of harm, the small number of deaths recorded meant that this could be a chance occurrence. Pain was measured by analgesic use. The pooled RR for the use of analgesics was 0.97 (95% CI 0.78 to 1.20).

Conclusion
There is no conclusive evidence from randomised controlled trials to support the routine use of inhaled oxygen in patients with acute AMI. A definitive randomised controlled trial is urgently required given the mismatch between trial evidence suggestive of possible harm from routine oxygen use and recommendations for its use in clinical practice guidelines.

Advice to Rest in Bed versus Advice to Stay Active for Acute Low-back Pain and Sciatica

Kristin Thuve Dahm, Kjetil G Brurberg, Gro Jamtvedt, Kåre Birger Hagen

The advice to rest in bed or stay active for patients with acute low-back pain or sciatica was evaluated.

Search Strategy
We searched the Cochrane Back Review Group Trials Register, CENTRAL, MEDLINE, EMBASE, Sport, and SCISEARCH to May 2009, reference lists of relevant articles, and contacted authors of relevant articles.

Selection Criteria
Randomized trials of the effectiveness of advice to stay active or rest in bed for patients with acute LBP or sciatica. The main outcomes were pain, functional status, recovery and return to work.

Main Result
Ten RCTs with varying risk of bias were included. For patients with acute LBP, results from two trials (N = 401) suggest small improvements in pain relief (SMD 0.22 (95% CI: 0.02 to 0.41)) and functional status (SMD 0.29 (95% CI: 0.09 to 0.49)) in favor of advice to stay active. For patients with sciatica, there is moderate quality evidence of little or no difference in pain relief (SMD -0.03 (95% CI: -0.24 to 0.18)) or functional status (SMD 0.19 (95% CI: -0.02 to 0.41)), between advice to rest in bed or stay active.

Low quality evidence (3 RCTs, N = 931) suggests little or no difference between exercises, advice to rest in bed or stay active for patients with acute LBP. Low quality evidence (1 RCT, N = 250) suggests little or no difference between physiotherapy, advice to rest in bed or stay active for patients with sciatica.

Conclusion
Moderate quality evidence shows that patients with acute LBP may experience small benefits in pain relief and functional improvement from advice to stay active compared to advice to rest in bed; patients with sciatica experience little or no difference between the two approaches. Low quality evidence suggests little or no difference between those who received advice to stay active, exercises or physiotherapy. Further research is very likely to have an important impact on the estimate of effect and is likely to change our confidence in it.

Self-monitoring and Self-management of Oral Anticoagulation

Josep M Garcia-Alamino, Alison M Ward, Pablo Alonso-Coello, Rafael Perera, Clare Bankhead, David Fitzmaurice, Carl J Heneghan

The effects of self-monitoring or self-management of oral anticoagulant therapy compared to standard monitoring were evaluated.

Search Strategy
We searched the Cochrane Central Register of Controlled Trials (CENTRAL) (The Cochrane Library 2007, Issue 4), MEDLINE, EMBASE and CINAHL (to November 2007). We checked bibliographies and contacted manufacturers and authors of relevant studies. No language restrictions were applied.

Selection Criteria
Outcomes analyzed were thromboembolic events, mortality, major hemorrhage, minor hemorrhage, tests in therapeutic range, frequency of testing, and feasibility of self-monitoring and self-management.

Main Result
We identified 18 randomized trials (4723 participants). Pooled estimates showed significant reductions in both thromboembolic events (RR 0.50, 95% CI 0.36 to 0.69) and all-cause mortality (RR 0.64, 95% CI 0.46 to 0.89). This reduction in mortality remained significant after the removal of low-quality studies (RR 0.65, 95% CI 0.46 to 0.90). Trials of self-

management alone showed significant reductions in thromboembolic events (RR 0.47, 95% CI 0.31 to 0.70) and all-cause mortality (RR 0.55, 95% CI 0.36 to 0.84); self-monitoring did not (thrombotic events RR 0.57, 95% CI 0.32 to 1.00; mortality RR 0.84, 95% CI 0.50 to 1.41). Self-monitoring significantly reduced major hemorrhages (RR 0.56, 95% CI 0.35 to 0.91) whilst self-management did not (RR 1.12, 95% CI 0.78 to 1.61). Twelve trials reported improvements in the percentage of mean INR measurements in the therapeutic range. No heterogeneity was identified in any of these comparisons.

Conclusion
Compared to standard monitoring, patients who self-monitor or self-manage can improve the quality of their oral anticoagulation therapy. The number of thromboembolic events and mortality were decreased without an increase in harms. However, self-monitoring or self-management was not feasible for up to half of the patients requiring anticoagulant therapy. Reasons included patient refusal, exclusion by their general practitioner, and inability to complete training.

Absorbable Suture Materials for Primary Repair of Episiotomy and Second Degree Tears

Christine Kettle, Therese Dowswell, Khaled MK Ismail

The effects of different suture materials on short- and long-term morbidity following perineal repair were evaluated.

Search Strategy
We searched the Cochrane Pregnancy and Childbirth Group's Trials Register (February 2010).

Selection Criteria
Randomized trials comparing different suture materials for perineal repair after vaginal delivery.

Main Result
We included 18 trials with 10,171 women; comparisons included: catgut with standard synthetic (nine trials), rapidly absorbing synthetic (two trials), and glycerol impregnated catgut sutures (two trials); and standard synthetic sutures with rapidly absorbing synthetic (five trials) and monofilament sutures (one trial).

Compared with catgut, standard synthetic sutures were associated with less pain up to three days after delivery (risk ratio (RR) 0.83, 95% confidence interval (CI) 0.76 to 0.90); and less analgesia up to ten days postpartum (RR 0.71, 95% CI 0.59 to 0.87). More women with catgut sutures required resuturing (15/1201) compared with synthetic sutures (3/1201) (RR 0.25, 95% CI 0.08 to 0.74); while more women with standard synthetic sutures required the removal of unabsorbed suture material (RR 1.81, 95% CI 1.46 to 2.24). Comparing standard synthetic with rapidly absorbing sutures, short- and long-term pain were similar; in one trial fewer women with rapidly absorbing sutures reported using analgesics at 10 days (RR 0.57, 95% CI 0.43 to 0.77). More women in the standard synthetic suture group required suture removal compared with those in the rapidly absorbed group (RR 0.24, 95% CI 0.15 to 0.36).

There was no evidence of significant differences between groups for long-term pain (three months after delivery) or for dyspareunia at three, or at six to 12 months. When catgut and glycerol impregnated catgut were compared, results were similar for most outcomes, although the latter was associated with more short-term pain. One trial examining monofilament versus standard polyglycolic sutures found no differences for most outcomes.

Conclusion

Catgut may increase short-term pain compared with synthetic sutures. There were few differences between standard and rapidly absorbing synthetic sutures but more women needed standard sutures removing. For other materials, there was insufficient evidence to draw conclusions. Findings should be interpreted in the context of the related Cochrane review on suturing techniques.