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Inguinal hernia repair improves patients' general health compared with watchful waiting

Research question Should asymptomatic inguinal hernias be repaired?

Answer Possibly. Surgery improves the general health of patients, without increasing the risk of long term pain.

Why did the authors do the study? Inguinal hernia repair has been associated with long term chronic pain, and a risk of recurrence of up to 10%. These authors wanted to investigate whether patients with asymptomatic hernias would do better if they were simply kept under observation.

What did they do? They recruited 160 men with asymptomatic inguinal hernias, all aged >55 years, for a randomised controlled trial of hernia repair or watchful waiting. The trial lasted one year and was based in a single surgical department. All participants completed the SF-36 general health questionnaire at baseline, six months, and 12 months. They also recorded any pain using visual analogue scales (100 mm). The SF-36 questionnaire measures eight health dimensions including general health, and physical, social, and emotional wellbeing. It also includes an item asking patients how their health has changed during the past year.

The main analyses were intention to treat. The trial had 80% power to detect a 20% difference in pain scores between the groups one year after randomisation. Patients assigned to surgery had a tension free mesh repair a mean of 103 days after randomisation.

What did they find? Patients who had surgery and those who didn't were equally likely to report pain at the site of the hernia six months and 12 months after randomisation (any pain at rest 30% *v* 28%, P = 0.86; any pain on movement 30% *v* 39%, P = 0.31 after one year) . Mean pain scores were also similar after one year (5.2 mm *v* 3.7 mm, mean difference 1.6 mm, 95% confidence interval −1.6 to 4.8, P = 0.34).

The only significant difference in scores from the SF-36 questionnaire was in the single item measuring change in health. Patients who had surgery reported an 8.5 point improvement (on a 100 point scale) over one year, patients who had watchful waiting reported a 0.3 point deterioration (adjusted mean difference 7.0, 95% CI 0.2 to 13.7, P = 0.045)

Twenty three patients who were assigned watchful waiting needed surgery during the trial, usually because of pain (11), or because their hernia had got bigger (8). One patient had surgery after an "acute presentation." There were no postoperative complications in the groups assigned to surgery, but one patient who crossed over from watchful waiting to surgery had a fatal postoperative heart attack.

What does it mean? In this trial there was little to choose between these two strategies, except that people who had surgery reported a small improvement in their health over the previous year. Surgery had no impact on the other eight dimensions of the SF-36, but did not increase the risk of hernia associated pain. These findings need to be confirmed, however, because the trial was too small to exclude a modest, but potentially meaningful, difference between the groups. The authors had planned a bigger and more powerful trial but slow recruitment reduced the final numbers.

O'Dwyer PJ et al. Observation or operation for patients with an asymptomatic inguinal hernia: a randomized clinical trial. *Ann Surg* 2006;244:167-73.

Editor's choice

On the shoulders of giants

When Iain Chalmers identified a clear case of plagiarism in a research article he was planning to include in a systematic review he expected some action from those involved. He was to be disappointed. The journal that published the article and the author's university both urged cautious handling to avoid damaging a distinguished researcher's reputation. Fifteen years later Chalmers writes in this week's *BMJ* that he regrets acquiescing in this low key approach (p 594). The author, Asim Kurjak, was subsequently found to have committed a further act of plagiarism. In the continued absence of action from Kurjak's university, Chalmers has decided to tell the story.

It may seem strange for the *BMJ* to publish a case in which we aren't directly involved. We do so to highlight the threat that plagiarism poses to the integrity of the biomedical literature. Plagiarism is one of the three high crimes of research misconduct as defined by the US Office of Research Integrity (the other two being fabrication and falsification), and the *BMJ* has acted swiftly in the past to name plagiarists and retract work that makes unacknowledged use of other people's words or ideas.

Naming and shaming is, says Chalmers, an appropriate response. He calls upon journals, institutions, and professional associations "to expose very publicly those found guilty of this form of scientific misconduct." In his accompanying commentary Miguel Roig agrees, but he also rightly advocates more investment in the teaching of ethical writing (p 596). Good writing is crucial for the effective transmission of ideas and information. If writing were less arduous, says Roig, the allure of misappropriating portions of other people's texts would be reduced.

Some people find writing easy, but Drummond Rennie, deputy editor at *JAMA*, has comfort for those of us who don't. He once told me that easy writing can make hard reading. Either way we need proper training in writing as part of medical and research education. This should include training in critical and creative thinking. Tim Albert, who has run hundreds of highly regarded writing courses around the world but who sadly retires this year, emphasises that clear thinking is the key to clear writing. He advises working on the branches (the paragraph structure) of a piece of writing and letting the leaves (the words and sentences) take care of themselves.

Given the number of words and ideas flying about, how can we avoid plagiarism? My advice is: (1) If another person says what you want to say better than you can, don't try to paraphrase, quote them and cite fulsomely. (2) Even if you are fantastically skilled at paraphrasing, always refer to the original source. (3) Learn to take pleasure in attributing ideas and words to other people. After all, truly original ideas are vanishingly rare. To paraphrase Bernard of Chartres, we are all of us like dwarves on the shoulders of giants. This is often misattributed to Isaac Newton. I got that from Wikipedia.

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