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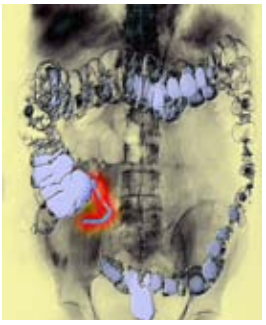

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Charles M Clark Jr, has been a diabetes specialist for over 30 years and is a retired associate dean for continuing medical education and professor of medicine at Indiana University School of Medicine. Jose Mario Franco de Oliveira is an associate professor in the Department of Medicine at Universidade Federal Fluminense and senior staff physician in the adults' intensive care unit at Hospital Federal da Lagoa, Rio de Janeiro.

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Effects of multidisciplinary team working on breast cancer survival This retrospective, comparative, interventional cohort study of 13 722 women by Eileen M Kesson and colleagues found that the introduction of multidisciplinary care was associated with improved survival from breast cancer and reduced variation in survival among hospitals [www.bmj.com/content/344/bmj.e2718].

Safety and efficacy of antibiotics compared with appendicectomy for treatment of uncomplicated acute appendicitis: meta-analysis of randomised controlled trials

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EDITORIAL by Bakker

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STUDY QUESTION

Are the safety and efficacy of antibiotic treatment for uncomplicated acute appendicitis comparable to those of appendicectomy?

SUMMARY ANSWER

Antibiotic treatment for uncomplicated appendicitis i s effective and is associated with a significant reduction in risk of complications compared with appendicectomy.

WHAT IS KNOWN AND WHAT THIS PAPER ADDS

Appendicectomy has been considered the "gold standard" treatment for acute appendicitis since McBurney first described the operation in 1889. Antibiotic treatment is both effective and safe as a primary treatment for patients with uncomplicated acute appendicitis and merits consideration as a primary treatment option for early uncomplicated appendicitis.

Selection criteria for studies

We searched the Medline, Embase, and Cochrane Library databases, the Cochrane Controlled Trials Register, and bibliographies of retrieved articles for randomised controlled trials comparing antibiotic treatment with appendicectomy for acute appendicitis published between January 1966 and December 2011. We included studies with well defined diagnostic and treatment protocols and reporting at least two outcome measures of interest. We excluded non-randomised studies, retrospective studies, retracted studies, case series, and studies that reported outcomes in patients with complicated appendicitis (local or contained perforation with an appendicular abscess or mass). We used methods recommended by the Cochrane Collaboration to do the meta-analysis.

Primary outcome(s)

The primary outcome measure of this meta-analysis was complications.

Main results and role of chance

Four randomised controlled trials with a total of 900 patients (470 antibiotic treatment; 430 appendicectomy) met the inclusion criteria. Antibiotic treatment was associated with a 63% (277/438) success rate at one year. Meta-analysis of complications showed a relative risk reduction of 31% for antibiotic treatment compared with appendicectomy (risk ratio (Mantel-Haenszel, fixed) 0.69 (95% confidence interval 0.54 to 0.89); I^2=0%; P=0.004). A secondary analysis, excluding a study with crossover of patients between the two interventions after randomisation, showed a significant relative risk reduction of 39% for antibiotic treatment (0.61 (0.40 to 0.92); I^2=0%; P=0.02). Of the 65/345 (20%) patients who had appendicectomy after readmission, nine had perforated appendicitis and four had gangrenous appendicitis. We found no significant differences for efficacy of treatment, length of stay, or risk of developing complicated appendicitis.

Bias, confounding, and other reasons for caution

Quality assessment of the included studies, using the GRADE approach, showed some limitations of study design and inconsistency but no obvious indirectness or imprecision of reporting of results. On the basis of the above assessments, the quality of evidence presented for each outcome ranged from low to moderate. Possible confounders include diagnosis of appendicitis not being confirmed radiologically in all patients in some studies, type and duration of antibiotic treatment, reporting of specific complications, and planned discharge after either antibiotic treatment or appendicectomy. Caution is needed in patients with stercoliths, as they are associated with complicated appendicitis, and in women in their reproductive years, as the risk of tubal infertility after primary antibiotic treatment is not known.

Study funding/potential competing interests

KKV was funded by a research fellowship from the Nottingham Digestive Diseases Centre NIHR Biomedical Research Unit.

Antibiotic treatment versus appendicectomy for acute uncomplicated appendicitis

Outcome	Statistical method	Effect estimate	
		All studies	Studies with no crossover of patients*
Complications	Risk ratio (Mantel-Haenszel, fixed) (95% CI); I^2	0.69 (0.54 to 0.89); I^2=0%; P=0.004	0.61 (0.40 to 0.92); I^2=0%; P=0.02
Length of primary hospital stay	Mean difference (inverse variance, random) (95% CI); I^2	0.20 (–0.16 to 0.56); I^2=70%; P=0.29	0.34 (–0.19 to 0.87); I^2=48%; P=0.20
Risk of complicated appendicitis	Risk ratio (Mantel-Haenszel, random) (95% CI); I^2	0.46 (0.19 to 1.12); I^2=82%; P=0.09	0.58 (0.18 to 1.90); I^2=74%; P=0.37

*Patients from one study excluded as large number of patients (96/202) crossed over from antibiotic group to appendicectomy group after treatment allocation.

Total hip arthroplasty versus resurfacing arthroplasty in the treatment of patients with arthritis of the hip joint: single centre, parallel group, assessor blinded, randomised controlled trial

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- Association between bisphosphonate use and implant survival after primary total arthroplasty of the knee or hip: population based retrospective cohort study (*BMJ* 2011;343:d7222)
- Primary total hip arthroplasty versus hemiarthroplasty for displaced intracapsular hip fractures in older patients: systematic review (*BMJ* 2010;340:c2332)
- Editorial: Hip resurfacing (*BMJ* 2010;341:c3459)

STUDY QUESTION Does resurfacing arthroplasty provide better hip function than total hip arthroplasty in patients with severe arthritis of the hip?

SUMMARY ANSWER We saw no evidence of a difference in hip function in patients with arthritis of the hip, one year after receiving a total hip arthroplasty versus resurfacing arthroplasty.

WHAT IS KNOWN AND WHAT THIS PAPER ADDS

Total hip arthroplasty (replacement) is a successful treatment for patients older than 65 years with severe arthritis of the hip, although they might not provide the best function in younger and more active patients, and could wear out. We found no evidence indicating that hip resurfacing, an alternative form of hip replacement, provides better hip function or higher activity levels than total arthroplasty in the first year after surgery.

Design

A single centre, parallel group, assessor blinded, randomised controlled trial with 1:1 treatment allocation to either total hip arthroplasty (replacement of femoral head and neck) or hip resurfacing arthroplasty (replacement of the articular surface of femoral head only). Both procedures replaced the articular surface of the acetabulum.

Participants and setting

We recruited 126 patients older than 18 years, with severe arthritis of the hip, and who were suitable for a resurfacing arthroplasty from one large teaching hospital in the United Kingdom. We excluded patients who were unable to adhere to trial procedures or complete questionnaires.

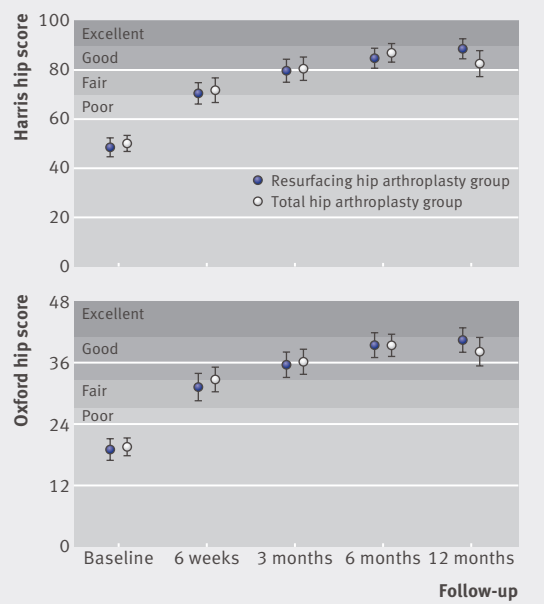
Primary outcome(s)

Hip function in the first 12 months after surgery, assessed by the Oxford hip score and Harris hip score. Secondary outcomes were quality of life, disability rating, physical activity level, complications, and cost effectiveness.

Main results and the role of chance

We randomly allocated 60 patients to hip resurfacing arthroplasty and 66 to total hip arthroplasty; 95% of follow-up data were available for analysis. Intention to treat analysis showed no difference in hip function between treatment groups in the first 12 months after operation (fig; Oxford hip score, P=0.242; Harris hip score, P=0.070). At 1 year follow-up, mean Oxford hip score was 40.4 (95% confidence interval 37.9 to 42.9) in the resurfacing group and 38.2 (35.3 to 41.0) in the total arthroplasty group (estimated treatment effect size 2.23 (−1.52 to 5.98)). Mean

Temporal trends in hip function score after surgery (mean, 95% confidence interval)



Harris hip score at 1 year follow-up was 88.4 (84.4 to 92.4) in the resurfacing group and 82.3 (77.2 to 87.5) in the total arthroplasty group (6.04 (−0.51 to 12.58)). Despite our results, we cannot definitively exclude clinically meaningful differences in short term hip function between the two treatment groups.

Harms

Overall complication rates did not differ between treatment groups (P=0.291). However, we saw more wound complications in the total arthroplasty group (P=0.056) and more thromboembolic events in the resurfacing group (P=0.049).

Bias, confounding, and other reasons for caution

We only reported the functional outcomes of resurfacing versus total hip arthroplasty in the short term. Clinical and cost effectiveness of hip resurfacing in the long term is still unknown. We did not think it ethical to blind the patients to their allocated type of hip arthroplasty because of the different risk-benefit considerations for each procedure.

Generalisability to other populations

This trial was conducted in only one NHS trust. However, owing to the large number of orthopaedic surgeons involved in the study (with various levels of experience), and the pragmatic approach used with regard to operative techniques and implants, we expect the results to be generalisable, nationally and internationally.

Diagnostic value of single complete compression ultrasonography in pregnant and postpartum women with suspected deep vein thrombosis: prospective study

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STUDY QUESTION Can single complete compression ultrasonography safely rule out deep vein thrombosis in pregnant and postpartum women?

SUMMARY ANSWER Single complete compression ultrasonography was associated with a low rate of failure for diagnosing deep vein thrombosis.

WHAT IS KNOWN AND WHAT THIS PAPER ADDS Single complete compression ultrasonography is widely used to rule out deep vein thrombosis in everyday clinical practice, but no data are available to support its use in the setting of pregnancy or the postpartum period. This study suggests that single complete compression ultrasonography may safely rule out deep vein thrombosis in pregnant and postpartum women.

Participants and setting

226 pregnant and postpartum women referred to two tertiary care centres and 18 private practices specialising in vascular medicine between January 2006 and June 2009.

Design, size, and duration

Prospective outcome study of diagnostic management with three month follow-up in pregnant and postpartum women who remained untreated after a negative single complete compression ultrasonography result.

Main results and the role of chance

Of 177 women without deep vein thrombosis and who did not receive full dose anticoagulant therapy, two (1.1%, 95% confidence interval 0.3% to 4.0%) had an objectively confirmed deep vein thrombosis during follow-up.

Bias, confounding, and other reasons for caution

The upper limit of the 95% confidence interval was above the 3% limit usually allowed in diagnostic studies of venous thromboembolism. The main limitations of the study were its small sample size, the inclusion of postpartum women, and the lack of a gold standard test.

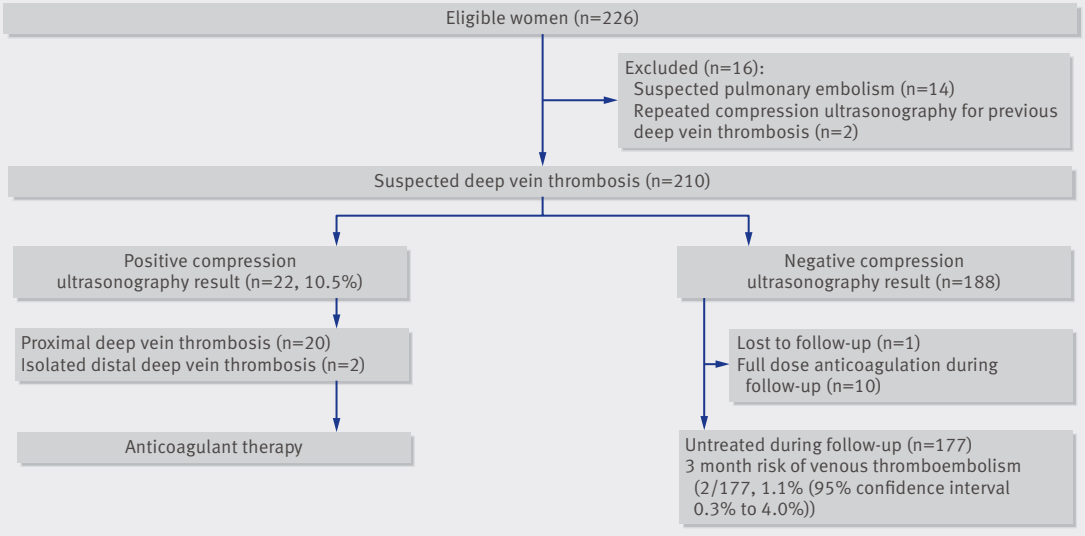
Generalisability to other populations

The study sample should be representative of the target population, as we included consecutive pregnant and postpartum women from various medical settings.

Study funding/potential competing interests

This study was supported by grants from the Projet Hospitalier de Recherche Clinique (grant No 2005 R 08.01) in France, and from the Swiss National Foundation (grant No 3200B0-120760) in Switzerland. The sponsors had no role in the study design; the collection, analysis, and interpretation of the data; writing of the article; and the decision to submit the paper for publication.

Flow of participants through study



Bullying victimisation and risk of self harm in early adolescence: longitudinal cohort study

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Clinical review: Suicide and deliberate self harm in young people (*BMJ* 2012;344:e2683)

STUDY QUESTION Does frequent bullying victimisation in childhood increase the likelihood of self harming in early adolescence, and which bullied children are at highest risk of self harm?

SUMMARY ANSWER Frequent victimisation by peers increased the risk of self harm at age 12 independently of a range of potential confounders, and children exposed to family adversity or who had specific concurrent mental health difficulties were at the greatest risk.

WHAT IS KNOWN AND WHAT THIS PAPER ADDS Bullying victimisation by peers is a prevalent problem in the United Kingdom and may be associated with increased rates of self harm. Most bullied children do not self harm, but those who do are more likely to have been maltreated, to have a family history of attempted/completed suicide, and to experience concurrent mental health problems.

Participants and setting

We assessed twin children in England and Wales at 5, 7, 10, and 12 years of age.

Design, size, and duration

The findings are drawn from the Environmental Risk (E-Risk) longitudinal study of a nationally representative cohort of 1116 twin pairs born in 1994-95 (2232 children). Mothers were interviewed about children's frequent exposure to bullying when they were aged 7 and 10 years, and children self reported previous bullying victimisation when they were aged 12 years. Mothers reported children's self harming behaviour in the six months before their 12th birthday.

Main results and the role of chance

Self harm data were available for 2141 children. A small proportion of 12 year olds had self harmed (2.9%, n=62), but more than half of these children were victims of frequent bullying (56%, n=35). Exposure to frequent bullying predicted higher rates of self harm even after we controlled for potential confounders (mothers' reported bullying victimisation: adjusted risk ratio 1.92, 95% confidence interval 1.18 to 3.12; children's reported bullying victimisation: 2.44, 1.36 to 4.40). We found no differences between boys and girls. Furthermore, bullied twins were more likely to self harm than were their non-bullied co-twins (mothers' reported bullying victimisation: 13/162 (8.0%) *v* 3/162 (1.9%); ratio=4.3, 1.3 to 14.0; children's bullying reported victimisation: 12/144 (8.3%) *v* 7/144 (4.9%); ratio=1.7, 0.71 to 4.1), indicating that shared environmental factors could not account for the observed association. Compared with bullied children who did not self harm, those who self harmed were distinguished by a family history of attempted/completed suicide, concurrent mental health problems, and a history of physical maltreatment by an adult.

Bias, confounding, and other reasons for caution

We took account of children's pre-morbid emotional and behavioural problems, low IQ, and family environmental risks. We also adjusted our estimates for the non-independence of the twin observations and used both mothers' and children's reports of bullying victimisation. However, the small number of children who self harmed may have led to biased estimates, and mothers may have under-reported self harm behaviours and exposure to maltreatment.

Generalisability to other populations

The sample comprised twins, and the results may not generalise to singletons. However, the prevalence of bullying victimisation and mental health problems has previously been shown to be the same for twins and singletons.

Study funding/potential competing interests

All researchers are independent of the study funders: the Medical Research Council, Economic and Social Research Council, National Institute of Child Health and Human Development, National Institute of Mental Health, British Academy, Nuffield Foundation, and Jacobs Foundation.

Logistic regression analysis of factors associated with self harm among bullied children (children's reports). Values are numbers (percentages) unless stated otherwise

Risk factor	No self harm (n=219)	Self harm (n=18)	Odds ratio (95% CI)
Family adversities:			
Socioeconomic deprivation	95 (43)	11 (61)	2.05 (0.74 to 5.67)
Family history of attempted/completed suicide	58/217 (27)	11/16 (69)	6.03 (1.94 to 18.73)
Maltreatment history	21 (10)	6 (33)	4.71 (1.62 to 13.75)
Child's mental health difficulties:			
ADHD diagnosis	20/188 (11)	4/15 (27)	3.05 (0.88 to 10.55)
Conduct disorder diagnosis	19/212 (9)	5/17 (29)	4.23 (1.28 to 14.02)
Extreme borderline characteristics	27 (12)	10 (56)	8.89 (3.06 to 25.80)
Extreme anxiety symptoms	40 (18)	5 (28)	1.72 (0.56 to 5.29)
Clinically significant depression	28 (13)	6 (33)	3.39 (1.13 to 10.19)
Psychotic symptoms	37 (17)	7 (39)	3.11 (1.09 to 8.85)
Mean (SD) child's IQ (12 years)	96.7 (15.8)	98.6 (14.9)	1.01 (0.98 to 1.04)

ADHD=attention-deficit/hyperactivity disorder.