No link between early abortion and mental illness in Denmark

Between 1995 and 2007, 84,620 Danish women and girls had a first trimester abortion. They were no more likely to see a psychiatrist in the 12 months afterwards than they were in the nine months before, a study has found. Early medical or surgical abortion does not seem to increase the short term risk of mental illness, say the authors, at least not in Denmark where first trimester abortion is legal, widely available, easily accessible, and free.

Incidence rates of inpatient or outpatient psychiatric contact barely changed after abortion (from 14.6 per 1000 person years [95% CI 13.7 to 15.6] to 15.2 [14.4 to 16.1]; P=0.19), but went up significantly after first childbirth (from 3.9 per 1000 person years [3.7 to 4.2] to 6.7 [6.4 to 7.0]; P<0.001) in a comparison cohort of 280,930 girls and women who delivered their first baby during the same period.

Both cohorts came from Denmark’s comprehensive system of national registers—one that records all residents, one that records all psychiatric contacts, and a third that records all residents, one that records all outpatient contacts for other reasons, including abortion and childbirth.

Women and girls with a history of mental illness were excluded from both cohorts. Even so, the authors found more psychiatric morbidity in the nine months before a first child (14.6 contacts per 1000 person years v 3.9). Women and girls at risk of abortion may well be more vulnerable than women and girls who continue with a pregnancy, say the authors. But the vulnerability clearly comes before the abortion. This study’s findings go against the hypothesis that abortion causes mental illness serious enough to warrant attention from psychiatric services.


Older poorer adults are less likely to get disease modifying drugs for rheumatoid arthritis

The list of quality indicators for health plans in the US includes a measure of how many patients with rheumatoid arthritis are treated with disease modifying antirheumatic drugs. In 2008, just over two thirds (67%) of patients aged 65 or more received these drugs, according to an observational analysis of data from 245 different plans. But the overall figure disguised wide variation. Rates of recommended treatment were particularly low for adults over 85 (41.5%; fully adjusted difference relative to adults 65-69 years −30%, 95% CI −31.7% to −28.7%). Poverty, male sex, minority cultural identity, and an address in the middle or southern Atlantic regions were other factors significantly associated with a lower chance of treatment with any disease modifying drug.

In the worst health plans, just 16% of older adults with rheumatoid arthritis received disease modifying treatment. The best plans managed to treat 87%, a dramatic difference that is hard to explain, say the authors. Health plans run for profit performed significantly worse than plans not run for profit (60.6% v 67.2%; fully adjusted difference −3.7%, −7.2% to −0.2%). All the adults in these analyses were eligible for Medicare.


Rt-PA once a week protects central venous catheters for haemodialysis

A substantial minority of haemodialysis patients still rely on central venous catheters for vascular access. After each haemodialysis session the two lumina must be “locked” with a solution to keep them clean and patent. Many units use heparin, but a recent trial suggests that switching heparin for recombinant tissue plasminogen activator (rt-PA) after one session (out of three) works better. Patients using rt-PA once a week had significantly fewer catheter malfunctions than controls using heparin after all three sessions (20.0% (22/110) v 34.8% (60/115); hazard ratio for heparin 1.91, 95% CI 1.13 to 3.22). They also had fewer bacteraemias (4.5% (5/110) v 13% (15/115); 3.30, 1.18 to 9.22). The trial lasted six months. It was funded by Hoffmann-La Roche but designed, conducted, and analysed by independent investigators from Canada.

Rt-PA costs an order of magnitude more than heparin. The authors and a linked editorial (p 372) think the extra expense is probably worth it. A preliminary economic analysis found that the rt-PA protocol cost an extra $1173 (£737; €855) for each patient treated for six months, or $13 956 for each episode of catheter related bacteraemia prevented. The editorial says renal units should now consider using rt-PA in central venous catheters, if they don’t already.

The trial was too small to explore whether rt-PA helped prevent hospital admission, catheter removal, sepsis, or death.


Swedish heart patients do better with CBT

One year of cognitive behavioural therapy (CBT) reduced the risk of cardiovascular events for close to nine years in a trial from Sweden. The 362 participants were recruited after a myocardial infarction or coronary revascularisation, and 192 had 20 sessions of group cognitive behavioural therapy that emphasised how
to manage stress, time pressures, and hostility. Treatment was intensive and well attended. The remaining 170 had standard care, which included advice to optimise their risk factors.

The group sessions were associated with a significant reduction in cardiovascular events during a mean follow-up of 94 months (36.5% [70/192] v 47% [80/170]; fully adjusted hazard ratio 0.59, 95% CI 0.42 to 0.83). Cognitive behavioural therapy helped prevent fatal and non-fatal heart attacks. It had no discernible effect on risk of death from any cause, but only 48 participants died during follow-up, roughly the same number in each group (23 v 25).

This isn’t the first study to evaluate psychological treatments for people with heart disease, say the authors. Others have reported mixed results for both counselling and stress management. The new trial tested a long term treatment, delivered in groups, with a focus on behavioural rather than cognitive training. It is too early to say which if any of these elements had the desired effect, or if participants simply benefited from the extra professional attention. The trial’s main limitation was lack of a control group given the same time and attention as the CBT group but without the therapy.

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Is CPR by bystanders a waste of time?

When someone collapses from a cardiac arrest at home or in the street, bystanders who know how will often start cardiopulmonary resuscitation (CPR). Are they wasting their time? At least one expert believes that chest compressions performed by well meaning bystanders could be an ineffective distraction from the more important task of calling the emergency services. CPR, as distinct from public use of automatic defibrillators, has never been properly tested in trials, he writes, and the dismal outcomes associated with it may be evidence that standard bystander CPR simply doesn’t work.

Millions have been trained and some professional organisations make a good living organising the training. Advocates continue to press for more. Yet outcomes after cardiac arrest out of hospital have remained essentially unchanged for almost 40 years. A randomised trial comparing CPR with no CPR may be heresy, but can’t be unethical, he writes. We simply do not know if chest compressions help save lives in the out of hospital setting. But we do know they can crush lethal rhythms, including asystole. Prompt defibrillation works. The CPR that precedes it may not. Rescue breathing is already being questioned and it is time to apply the same critical thinking to chest compressions.


Bevacizumab implicated in excess fatal adverse events

Bevacizumab is an anti-cancer agent that inhibits angiogenesis. Approved indications include solid tumours of the lung, kidney, colon, and rectum, although there is little consistent evidence that the agent prolongs overall survival. Fatal side effects may be part of the explanation.

A new meta-analysis of 16 trials reports that bevacizumab is associated with extra deaths from adverse events when combined with standard chemotherapeutic or biological agents, particularly taxanes and platinum based drugs (incidence of fatal adverse events 2.5% [148/5589] in patients given bevacizumab v 1.7% [72/4628] in controls treated without bevacizumab; relative risk 1.46, 95% CI 1.09 to 1.94). Deaths from haemorrhage, neutropenia and infection, gastrointestinal perforation, and thromboembolism contributed most to the excess risk. The small number of deaths in these analyses made further exploration difficult, although the authors found non-significant hints that risk might be associated with dose and with tumour type.

These data leave bevacizumab in a difficult place, says one commentator (p 506). So far, we know it delays tumour progression, but not for everyone, and possibly not for long. We know it can be risky, but we can’t tell which patients are most likely to have fatal adverse events. Finally, we know this drug costs an estimated $100 000 (£63 000; €73 000) per patient per year but often fails to prolong life. Researchers and regulators have more work to do defining the role of bevacizumab in patients with solid tumours.

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Effect of statins looks independent of CRP concentration

C reactive protein (CRP) is a risk factor for vascular disease, and experts continue to debate whether statins work best for people with high serum concentrations. In the latest exchange, researchers took a fresh look at data from a large placebo controlled trial of simvastatin for high risk adults. Simvastatin protected everyone from vascular events over five years and worked equally well in participants with high and low baseline concentrations of CRP.

The original trial looked at 20 536 men and women aged 40-80 years. Two thirds had coronary heart disease and the rest had other vascular disease outside the heart, diabetes, or hypertension. Participants who took simvastatin had 24% fewer vascular events than controls over five years (event rate ratio 0.76, 95% CI 0.72 to 0.81), including heart attacks, strokes, and death from vascular events. Risk reductions were comparable for six subgroups categorised according to their baseline concentrations of CRP, including the subgroup with concentrations below 1.25 mg/ L (14.1% v 19.4%; 29% risk reduction, 99% CI 12% to 43%). Simvastatin reduced the risk of vascular events by 27% (99% CI 11% to 40%) in adults who started with low concentrations of both CRP and low density lipoprotein-cholesterol.

The authors are confident that their large analysis debunks the hypothesis that the benefits of statin treatment depend on CRP concentrations. An editorial (doi:10.1016/S0140-6736(10)62316-5) is confident only that the debate isn’t over yet.

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