

More evidence against axillary node dissection

Axillary node dissection is slowly going out of favour for women with early breast cancer because of accumulating evidence that looking for metastases beyond sentinel lymph nodes does more harm than good. Even women with positive sentinel lymph nodes can often be treated safely and effectively without further axillary dissection, say researchers, after a trial suggested that aggressive removal of lymph nodes did not prevent recurrence or prolong survival.

The trial looked at 891 women with early breast cancer and a small number of positive sentinel lymph nodes (usually one or two). They all had a lumpectomy, followed by tangential field radiation of the whole breast. More than 90% also had adjuvant chemotherapy. Half the women had further axillary dissection and removal of at least 10 lymph nodes. The rest had sentinel lymph node dissection only. Survival over 5 years was essentially the same for both groups of women and better than expected for everyone 91.8% (95% CI 89.1% - 94.5%) after complete dissection and 92.5% (90.0% - 95.1%) after sentinel node dissection; adjusted hazard ratio 0.87 (90% CI, 0.62 - 1.23).

Researchers planned a much bigger trial but survival was so good it would have taken more than 20 years to accumulate the number of deaths specified in the original protocol. These truncated findings are good enough, says an editorial. With modern treatments, many women can safely do without extensive axillary surgery.

Juliano AE *et al. JAMA* 2011;305:569-575.

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 coronary arteries, lacerate livers, and occasionally rupture an oesophagus.

We also know that shockable, survivable rhythms such as ventricular fibrillation decay – sometimes quickly – into unshockable more 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.

Bardy GH. *N Engl J Med* 2011;364:374-375.

Sterile gloves help prevent contamination of blood cultures

Blood cultures must be taken carefully to minimise the risk of contamination, and sterile gloves can help, say researchers. In their cluster randomised crossover trial, cultures taken by junior doctors wearing sterile gloves were less likely to be contaminated than cultures taken by doctors given the option not to wear sterile gloves (adjusted odds ratio 0.57, 95% CI 0.37 - 0.87). Analyses included 10 520 cultures from 1 854 patients treated in a large tertiary referral hospital in Seoul, Republic of Korea. During optional periods, doctors wore

sterile gloves for just 7.3% (296/4 037) of blood culture procedures, preferring clean but non-sterile gloves for the rest.

Sterile gloves almost halved contamination rates in this trial, but rates were low to start with (between 0.9% and 1.1% depending on the definition), says an editorial (p 202). Knowing that they were in a trial may have inspired these doctors to culture more carefully, or they may have been better trained than doctors elsewhere. Perhaps excluding the emergency department, where practice is more chaotic, kept overall contamination rates down.

Contaminated blood cultures are an expensive waste of time and effort, and they can cause serious harm to patients through unnecessary tests and treatments. These findings make a good clinical case for compulsory use of sterile gloves, but only when combined with meticulous attention to other elements of good technique, including hand washing, cleaning of the venepuncture site, wiping the top of culture bottles, and avoiding indwelling lines. The economic case has yet to be made, however. Sterile gloves are expensive too.

Nak-Hyun K *et al. Ann Intern Med* 2011;154:145-151.

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