

Abstracts

Home-based cardiac rehabilitation as good as centre-based care

A recent study from the UK suggests that patients adhere to and benefit from home-based cardiac rehabilitation in the same way that they do to centre-based care.

Hasnain M Dalal and colleagues used a meta-analysis of Cochrane data to look at 12 studies that included 1 938 participants. They compared the effect of home-based and supervised centre-based cardiac rehabilitation on mortality and morbidity, health-related quality of life, and modifiable cardiac risk factors in patients with coronary heart disease.

Most studies recruited patients with a low risk of further events after myocardial infarction or revascularisation. No difference was seen between home-based and centre-based cardiac rehabilitation in terms of mortality (relative risk 1.31, 95% confidence interval 0.65 - 2.66), cardiac events, exercise capacity (standardised mean difference -0.11, -0.35 - 0.13), modifiable risk factors (weighted mean difference systolic blood pressure (0.58 mmHg, -3.29 - 4.44 mmHg), total cholesterol (-0.13 mmol/l, -0.31 - 0.05 mmol/l), low-density lipoprotein cholesterol (-0.15 mmol/l, -0.31 - 0.01 mmol/l), or relative risk for proportion of smokers at follow-up (0.98, 0.73 - 1.31)), or health-related quality of life, with the exception of high-density lipoprotein cholesterol (-0.06, -0.11 - -0.02 mmol/l). In the home-based participants, there was evidence of superior adherence. No consistent difference was seen in the health care costs of the two forms of cardiac rehabilitation.

Home- and centre-based forms of cardiac rehabilitation seem to be equally effective in improving clinical and health-related quality of life outcomes in patients with a low risk of further events after myocardial infarction or revascularisation. This finding, together with the absence of evidence of differences in patients' adherence and health care costs between the two approaches, supports the further provision of evidence-based, home-based cardiac rehabilitation programmes such as the 'Heart manual'. The choice of participating in a more traditional,

supervised centre-based or evidence-based home-based programme should reflect the preference of the individual patient.

Dalal HM, *et al. BMJ* 2010; 340: b5631.

Early physiotherapy may help prevent lymphoedema after breast cancer treatment

Lymphoedema is a common, distressing and difficult to treat complication of surgery and radiotherapy for breast cancer.

A study from Spain, published in the *British Medical Journal*, suggests that early physiotherapy may be an effective intervention.

Maria Torres Lacomba and colleagues looked at the effectiveness of early physiotherapy in reducing the risk of secondary lymphoedema after surgery for breast cancer.

They used a randomised, single-blinded clinical trial involving 120 women who had breast surgery involving dissection of axillary lymph nodes between May 2005 and June 2007.

The early physiotherapy group was treated by a physiotherapist with a physiotherapy programme including manual lymph drainage, massage of scar tissue, and progressive, active and action-assisted shoulder exercises. This group also received an educational strategy. The control group received the educational strategy only.

The main outcome measure was incidence of clinically significant secondary lymphoedema (>2 cm increase in arm circumference measured at two adjacent points compared with the non-affected arm).

They found that 116 women completed the 1-year follow-up. Of these, 18 developed secondary lymphoedema (16%): 14 in the control group (25%) and 4 in the intervention group (7%). The difference was significant ($p=0.01$); risk ratio 0.28 (95% confidence interval 0.10 - 0.79). A survival analysis showed a significant difference, with secondary lymphoedema being diagnosed 4 times earlier in the control group than in the intervention group (intervention/control, hazard ratio 0.26, 95% confidence interval 0.09 - 0.79).

Early physiotherapy could be an effective intervention in the prevention of secondary lymphoedema in women for at least 1 year after surgery for breast cancer involving dissection of axillary lymph nodes.

Lacomba MT, *et al. BMJ* 2010; 340: b5396.

Reducing deaths from drowning

With an average of 2 people drowning per day in South Africa, this study from Australia may be pertinent.

Richard Franklin, Justin Scarr and John Pearn explored 5 years of deaths due to drowning in Australia compared with a previous Australian study a decade earlier, and assessed the feasibility of achieving a 50% reduction in unintentional drowning deaths by 2020.

They used an audit of all unintentional drowning deaths in Australia using data from the National Coroners Information System for 1 July 2002 - 30 June 2007.

The main outcome measures were number and rate of drowning deaths by age, sex, location, activity, place of birth, visitor status, and involvement of alcohol or drugs.

They found that there were 1 452 drowning deaths during the study period (76.4% male). The age-adjusted rate per 100 000 people ranged from 1.61 in 2002 - 2003 to 1.23 in 2006 - 2007. Children aged 0 - 4 years had the highest rate (2.63 per 100 000 people), and 29% of deaths were of people aged 55 years or older. Over half of all deaths occurred in rivers (20.3%), at beaches (18.3%), or in swimming pools (13.3%). Alcohol was involved in 21.6% of all drowning deaths, although this varied by age.

This audit suggests that a 50% reduction in drowning fatalities by 2020 may be achievable using current knowledge and preventive systems in certain types of immersions. However, further research and new initiatives will be required, particularly to prevent drowning deaths in rivers and of older people.

Franklin CR, *et al. MJA* 2010; 192 (3): 123-126

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