EXERCISE AND BONE DENSITY IN OLDER WOMEN

M.ET. McMurdo, P.A. Mole and C.R. Paterson*

Departments of Ageing and Health and Biochemical Medicine*, University of Dundee, Ninewells Hospital, Dundee DD1 9SY

While exercise, particularly weight-bearing exercise, contributes to the development of bone mass in childhood and early adult life, it is not yet clear whether exercise programmes are effective in preserving bone mass after the menopause. To address this, 118 postmenopausal women (average age 64.6 years) were allocated at random to either receive 1000 mg calcium daily (calcium group) or to a group attending thrice weekly 45 minute group weight-bearing exercise sessions in addition to also receiving calcium supplementation (exercise-calcium group).

A total of 92 (78%) women completed the two year project. Bone density decreased significantly in the calcium group at the ultradistal and distal forearm, and at the lumbar spine (p<0.001). The percentage change in bone density for the calcium group was -2.6% (95% confidence interval -4.6 to -0.6) at the ultradistal site over two years; the exercise-calcium group showed an increase of 1.1% (95% confidence interval -0.8 to +3.1%). At the distal site and at the lumbar spine, there was no difference between the groups. During the study, 31 falls were recorded in the calcium group, and 15 in the exercise-calcium group. This was statistically significant at 18 months (p=0.011). Exercise-calcium showed a modest additional effect on bone density of the ultradistal forearm compared to calcium supplementation alone. Although few exercise programmes can be sustained long enough in the elderly to have a lasting effect on bone density and fractures, the observed association between exercise and a reduced tendency to fall may be of importance in fracture prevention.

MORBIDITY SCORES PREDICT FUTILE CARDIOPULMONARY RESUSCITATION (CPR)

L Bowker, A Wagg and K Stewart

Royal Hampshire County Hospital, Winchester and UCL Hospitals, London

INTRODUCTION. Morbidity scores may be useful for predicting which patients will not survive CPR. Two such instruments, the Pre Arrest Morbidity (PAM) and the Prognosis After Resuscitation (PAR) scores, have been found to predict futile CPR in an Irish Teaching Hospital where no patient with a PAM greater than 4/25 or PAR greater than 5/28 survived (Resuscitation 1994 28:21-25). These scores have not been validated in a British hospital. We have calculated PAM and PAR scores for all patients who had CPR in our District General Hospital over a 15 month period.

METHOD and RESULTS Consecutive patients who had a first CPR attempt between 1.9.94 and 13.11.95 were retrospectively identified from switchboard and ward records. Patients were excluded if CPR was initiated out of hospital or not attempted on arrival of the arrest team. Second or subsequent attempts were excluded. CPR was regarded as successful if the patient was discharged alive. Morbidity scores were calculated from casenotes and computer based records. 145 patients had CPR attempts during the study period. 127 patients died; PAM scores for these patients were 0 to 13 (mean 4.1) and PAR scores -2 to 18 (mean 4.1). 18 patients (12%) survived. Mean morbidity scores for survivors were PAM 2.3 (range 0-6) and PAR 1.6 (range -2-5). No patient with a PAM more than 6 or PAR more than 5 survived.

CONCLUSIONS These results confirm that morbidity scores may be useful for predicting futile CPR in British patients. This may be helpful when Do Not Resuscitare decisions need to be made on the basis of futility.

RESUSCITATING PATIENTS WITH DEMENTIA - HOW DO YOU DECIDE - PROXIES OR LIVING WILLS?

D M Collas, C Tannock, Z Walker and C Katona

Division of Geriatrics and Department of Psychiatry University College London Medical School

INTRODUCTION - do not resuscitate (DNR) orders are applied to patients with dementia according to severity, likely outcome, quality of life, and wishes of patients (ascertained directly if mild, or via advance directives or health care proxies) and of relatives AIM - to assess extent of variation in attitude and practice of geriatricians when making DNR decisions in demented patients METHOD - postal survey of all geriatricians on BGS list, 1995. RESULTS - 1134 questionnaires sent out, 418 (37%) returned. Only 5 geriatricians thought resuscitation always appropriate and would want it if severely demented themselves. 199 thought age was relevant. Lack of medical benefit was ranked the most important reason for a DNR order by 248 doctors, patients’ wishes by 127, poor pre-existing quality of life by 75, poor quality if resuscitated by 30, relatives’ wishes by 8: 88% of responders thought relatives’ views important, and 28% felt bound by them. 71% thought advance directives a good idea (85 definitely, 204 probably) but only 164 (51 definitely, 113 probably) thought they should be binding; 35% thought health care proxies a good idea (31 definitely, 111 probably) which should be introduced into the UK, 164 disagreed, with 99 undecided 85 favoured legalising euthanasia for terminal mentally competent patients (30 definitely, 55 probably) and in dementia 72 would then follow an advance directive to this effect (32 definitely, 40 probably), 93 would follow an appointed proxy’s request (32 definitely, 61 probably). CONCLUSION - lack of medical benefit and quality of life are important in making DNR decisions in dementia; geriatricians wish to know more of a patient’s own views but few wanted advance directives to be binding; most consult relatives, some feel bound by wishes, only a minority favour health care proxies.