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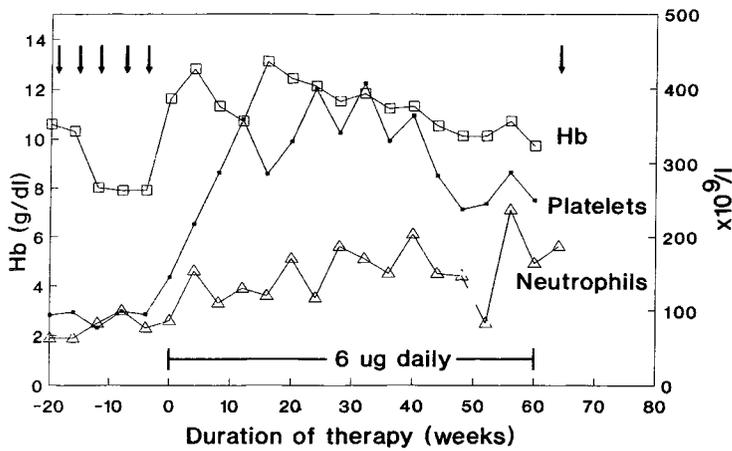
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Haematological effects of alfalcidol in MDS patient.

Platelets and neutrophils increased to normal and haemoglobin increased to 12 g/dl without red cell transfusion (arrows).

phosphate 5 g thrice daily and two to four infusions of disodium pamidronate 1 mg/kg. Two patients were maintained on oral sodium clodronate. Alfalcidol was continued in all patients. Serum creatinine increased in two patients with hypercalcaemia (up to 150 $\mu\text{mol/l}$) but returned to normal on stopping therapy.

Previous attempts to use oral vitamin D analogues in patients with MDS have been unsuccessful. We have shown that the active metabolite of vitamin D₃, 1,25(OH)₂D₃, can be sustained by oral administration of vitamin D analogues at concentrations that induce differentiation *in vitro*.⁶ Clinically beneficial haemopoiesis can be induced in some patients with MDS by this method. We suggest that the mechanism of action is via induction of differentiation in the abnormal haemopoietic cell clone, because increases in red cell and platelet counts imply that maturation occurs in more than one lineage. With refinement, vitamin D therapy may be of value in the treatment of MDS.

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1. Aul C, Gatterman N, Heyll A, Germing U, Derigs G, Schneider W. Primary myelodysplastic syndromes: analysis of prognostic factors in 253 patients and proposals for an improved scoring system. *Leukemia* 1992; **6**: 52-59.
2. Tricot GJ. Complications and treatment of the myelodysplastic syndromes. *Leuk Res* 1992; **16**: 117-21.
3. Munker R, Norman A, Koeffler HP. Vitamin D compounds: effect on clonal proliferation and differentiation of human myeloid cells. *J Clin Invest* 1986; **78**: 424-30.
4. McCarthy D, Hibbin J, San Miguel JF, et al. The effect of vitamin D₃ metabolites on normal and leukaemic bone marrow cells *in vitro*. *Int J Cell Cloning* 1984; **2**: 227-42.
5. Koeffler HP, Hirji K, Itri L, and Southern California Leukaemia Group. 1,25-dihydroxyvitamin D₃: *in vitro* and *in vivo* effects on human preleukaemic and leukaemic cells. *Cancer Treat Rep* 1985; **69**: 1399-407.
6. Kelsey SM, Makin HLJ, Newland AC. Functional significance of induction of differentiation in human myeloid leukaemic cells by 1,25-dihydroxyvitamin D₃ and GM/CSF. *Leuk Res* 1992; **16**: 427-34.

Serum cholesterol and long-term death rates from suicide, accidents, or violence

SIR,—Dr Engelberg (March 21, p 727) and Muldoon et al¹ have raised the concern that cholesterol lowering treatment may lead to suicide, accidents, or violence. The numbers of such deaths in trials of cholesterol-lowering drugs were too small for firm conclusions. Nevertheless the issue deserves careful consideration, because entire populations are now urged to lower cholesterol by dietary means. We report average serum cholesterol concentrations and rates of suicide and of death by accidents or violence in the Seven

Countries Study. This study was done in 16 cohorts from Finland, Greece, Italy, Japan, USA, Netherlands, and the former Yugoslavia to make a total of 12 763 men aged 40-59 at baseline, who were followed for 25 years.² Serum cholesterol concentrations at entry ranged from 4 mmol/l in farmers in Japan and Serbia to 7 mmol/l in eastern Finns. There was no relation between the average initial serum cholesterol per cohort and 25-year deaths rates from suicide, accidents, or violent death ($r = -0.27$). The highest rate was seen in the cohort from Slavonia (Croatia) and the lowest rate in Zutphen (Netherlands).

We conclude that, in these men, large crosscultural differences in serum cholesterol did not lead to measurable differences in the death rates from suicide, accidents, or violence. Pekkanen and co-workers³ also did not find an association between serum cholesterol at baseline and 25-year mortality from accidents and violence within the Finnish cohorts of the Seven Countries Study. These results suggest that in observational epidemiology, serum cholesterol seems not to be related to long-term death from suicides, accidents, or violence.

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1. Muldoon MF, Manuck SB, Matthews KA. Lowering cholesterol concentrations and mortality: a quantitative review of primary prevention trials. *BMJ* 1990; **301**: 309-14.
2. Keys A, Menotti A, Karvonen MJ, et al. The diet and 15-year death rate in the Seven Countries Study. *Am J Epidemiol* 1986; **124**: 903-15.
3. Pekkanen J, Nissinen A, Punsar S, Karvonen M. Serum cholesterol and risk of accidental or violent death in 25-year follow-up. *Arch Intern Med* 1989; **149**: 1589-91.

Clinical outcome of *Borrelia burgdorferi* related dilated cardiomyopathy after antibiotic treatment

SIR,—Dr Gasser and colleagues (May 9, p 1174) report an improvement with ceftriaxone in 8 of 9 patients with dilated cardiomyopathy seropositive for *Borrelia burgdorferi*. They do not mention duration of heart disease, or provide conclusive evidence for actual presence of chronic *B burgdorferi* infection, such as endomyocardial biopsy findings, silver stain, or culture. We have investigated 72 consecutive patients with chronic dilated cardiomyopathy (mean duration of disease 5 years, range 0.5-25 years) for the prevalence of serum antibodies to *B burgdorferi*.¹ Evidence of chronic infection with *B burgdorferi* was found in 10 of these patients by means of endomyocardial biopsy silver staining or culture of spirochaetes.²⁻⁴ Overall, 20 patients were treated with antibiotics (9 with ceftriaxone, 8 with doxycycline, 3 with penicillin). Contrary to Gasser's findings, we observed no important changes in left ventricular ejection fraction (mean 25 [6%]). Only 2 patients, who had disease of less than 6 months' duration, showed definite clinical improvement, 1 with complete recovery, another with improvement from 28% to 38% ejection fraction. Clinical symptoms improved in 4 patients. 2 patients had heart transplantation, and 2 died. Multiple cycles of antibiotic treatment or switching to other antibiotics seemed to confer little additional benefit. The antibiotic regimen used and the effect of such treatment on dilated cardiomyopathy apparently associated with *B burgdorferi* remains unclear, especially in patients with longstanding disease.²⁻⁵ Furthermore, in such patients *B burgdorferi* infection as a cause of the disease is difficult to prove. Finally, we