



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 D<sub>3</sub>, 1,25(OH)<sub>2</sub>D<sub>3</sub>, can be sustained by oral administration of vitamin D analogues at concentrations that induce differentiation *in vitro*.<sup>6</sup> 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.

Department of Haematology,  
Royal London Hospital,  
London E1 1BB, UK

Department of Nephrology,  
Royal London Hospital

Department of Chemical Pathology,  
London Hospital Medical College

Department of Haematology,  
Southend General Hospital

Department of Haematology,  
Barking Hospital

S. M. KELSEY  
A. C. NEWLAND

J. CUNNINGHAM

H. L. J. MAKIN  
R. D. COLDWELL

M. J. MILLS

I. R. GRANT

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

SIR,—Dr Engelberg (March 21, p 727) and Muldoon et al<sup>1</sup> 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.<sup>2</sup> 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-workers<sup>3</sup> 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.

Division of Public Health Research,  
National Institute of Public Health  
and Environmental Protection,  
3720 Bilthoven, Netherlands

Department of Human Nutrition,  
Agricultural University,  
Wageningen

Laboratory of Epidemiology and Biostatistics,  
National Institute of Health,  
Rome, Italy

School of Public Health,  
University of Minnesota,  
Minneapolis, USA

Department of Epidemiology,  
National Institute of Public Health  
and Environmental Protection,  
Bilthoven

DAAN KROMHOUT

MARTIJN B. KATAN

ALESSANDRO MENOTTI

ANCEL KEYS

BENNIE BLOEMBERG  
on behalf of the  
Seven Countries Study Group

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### 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*.<sup>1</sup> 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.<sup>2-4</sup> 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.<sup>2-5</sup> Furthermore, in such patients *B burgdorferi* infection as a cause of the disease is difficult to prove. Finally, we