Comment

Several antibiotics, including streptomycin, interfere with neuromuscular transmission.² Neuromuscular blockade usually develops after introduction of the drug into the peritoneal or pleural cavity during operation or after parenteral administration and leads to respiratory difficulties in the immediate postoperative period.

Myopathy, however, has not previously been recorded with antituberculous drugs. This case shows that this complication may occur with rifampicin. Thrombocytopenia, acute haemolytic anaemia, the "flu" syndrome, and acute renal failure have all been associated with rifampicin. These side effects are usually seen with intermittent treatment³ or after early reintroduction of rifampicin after completion of a course.⁴ Renal failure may occur after a treatment gap of more than two years.⁵ Rifampicin antibodies are more commonly detected in patients who develop side effects, but titres fall at the end of treatment. The rapid onset of myopathy in our patient when rifampicin was reintroduced, compared with the slow development initially, together with a previous uneventful course of treatment suggest a similar mechanism.

The proximal myopathy in this patient was directly related to the rifampicin treatment, and this important adverse effect should

therefore be considered in any patient who complains of undue weakness during antituberculous chemotherapy.

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Serum 25-hydroxy vitamin D in surface and underground coalminers

During studies on the effects of photochemotherapy on serum 25-hydroxy vitamin D (25-OHD) in psoriasis^{1,2} we wondered whether, as some of the patients were coalminers, the variation that we found before treatment might in part be associated with the length of time spent underground. Because the nature of their work makes coal-

underground coalworkers and those in other occupations in the Newcastle region suggests that the degree of solar irradiation obtained by underground workers between shifts was adequate to maintain vitamin D synthesis in the skin. The similar concentrations in those who had just started and those who had been working a

Serum 25-OHD concentrations in coal miners and other workers (nmol/l)

	Underground workers							All underground workers	Surface workers	Miners not at work	Non-miners
	Time of shift				Duration of shift						
	0600-1400	0900-1700	1400-2200	2200-0600	1 day	3 days	> 7 days				
Mean	62.8	77.3	65.5	99.5	76.8	64.5	79.8	73.8	82.3	83.5	67.5
SE	11.5	8.8	15.3	43.0	14.0	10.3	10.3	7.3	15.5	27.5	8.8
n	20	60	17	4	22	30	49	101	19	6	32

Conversion: SI to traditional units—25-OHD: 1 nmol/l $\approx$ 0.4 ng/ml.

miners prone to bony injury reduced serum 25-OHD concentrations might be important; we therefore measured serum 25-OHD concentrations in surface and underground workers.

Subjects, methods, and results

A total of 107 coalminers aged between 36 and 61 years from eight collieries in the Newcastle upon Tyne region participated in the study. Four worked a night shift (2200-0600 h) and 103 one of three day shifts (0600-1400, 0900-1700, 1400-2200 h). Duration of work on the shift was noted for each individual. Six participants had not worked for some time because of minor ailments. All blood samples were taken between 0900 and 1100 during May to July 1980. Within the same period blood samples were taken from a control population who were not coalminers, comprising 36 men and women who had been treated for minor skin disease and lived in the Newcastle region. Serum 25-OHD concentration was measured by competitive protein binding.³

The table shows that there were no appreciable differences in serum 25-OHD concentrations between surface and underground workers even when compared with either the control population or the small group of coalminers on sick leave. There were also no substantial differences in serum 25-OHD concentrations between the coalminers working the early, middle, and late day shifts, but there were insufficient numbers to compare the night-shift with the day-shift workers. Likewise there was no difference in serum 25-OHD concentrations between those who had just started day shifts and those who had worked day shifts for longer periods.

shift for some time, as well as in underground workers and the small group of coalminers on leave for various minor ailments, is in keeping with this view. As the study was done in the summer, the period of maximal sunlight, we cannot exclude the possibility that exposure to ultraviolet light might prove inadequate in miners working underground in the short daylight hours of the winter.

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Comment

The similarity of serum 25-OHD concentrations in surface and