with oral ciprofloxacin (750 mg twice daily) and insulin. After three weeks he was discharged taking ciprofloxacin, and meatal swabs yielded no growth. Treatment was stopped after 10 weeks, and after five months he remained free of disease.

Comment

There are few reports of treating malignant external otitis with ciprofloxacin, and in none of these was the drug used orally as the only antibiotic. Treating otitis with oral ciprofloxacin is an important advance in managing this disease as it obviates the necessity for patients to stay in hospital long term to receive antibiotics intravenously and eliminates the risks of secondary ototoxicity and nephrotoxicity associated

with traditional treatment. We do not know whether a lower dose than 750 mg twice daily would suffice, but as malignant external otitis has a reported mortality of 35% (51% when a facial palsy develops and 75% when multiple cranial nerve palsies develop)⁵ it seems reasonable to use high doses of a well tolerated drug with few side effects.

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Familial myelodysplasia

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Myelodysplastic syndromes are clonal haematological disorders that precede leukaemia. Families in which more than one member is affected by myelodysplasia are occasionally reported.¹ Such patients are at greater risk of developing cancer than the normal population.² The mechanism for this is not certain but might be either hereditary or environmental. We examined our records to see whether first degree relatives of patients with myelodysplasia have a higher than expected incidence of myelodysplasia.

Patients, methods, and results

Myelodysplasia was diagnosed³ in 193 patients who were referred to the University Hospital of Wales between October 1982 and September 1988. Their ages ranged from 20 to 91, and 108 were men. The hospital records of these patients were examined to determine the number who had first degree relatives with myelodysplasia. To eliminate bias due to case finding relatives were not screened for myelodysplasia unless two family members were known to be affected or they had a history of anaemia, excessive bleeding, or recurrent infections. Because the frequency with which myelodysplasia is diagnosed seems to be increasing⁴ we excluded relatives in whom the disease was diagnosed before or after the registration period.

We identified five people with myelodysplasia among the first degree relatives of four patients who were already on the register. The four patients and their relatives comprised two pairs of parent and child,

one pair of brothers, and three siblings. We excluded two additional first degree relatives with myelodysplasia whose disease had been diagnosed before the register was started and one woman with acute myeloblastic leukaemia who was a member of the family that contained three patients with myelodysplasia.

From the 193 patients on the register we calculated age specific incidences. The table shows the results. Assuming that there was no familial association, we estimated the expected number of first degree relatives with myelodysplasia by attributing, to each of the 193 patients, up to three offspring 25 years younger, up to three siblings of the same age, and up to two parents 25 years older and multiplying each of the numbers at risk by the age specific incidences. Thus the estimated number of first degree relatives with myelodysplasia was 0.35. We identified five such people during the six years, representing a 15-fold increased risk. The 99% confidence interval for the relative risk was 3.1 to 40.4 (Poisson).

Comment

An increased incidence of myelodysplasia in the families of patients with myelodysplasia has not been reported before, but previous reports have described individual affected families.¹ This hospital serves as a referral centre for a population of about 1.4 million people, and the annual incidence of 23 per million each year is comparable with a previous estimate.⁴

Explanations of the increased incidence of the disease in relatives of patients might also account for the increased incidence of non-haemopoietic malignancies in patients with myelodysplasia.² It has been suggested that inheritance of rare alleles at the locus of the Ha-ras oncogene is linked to a susceptibility to malignancy, including myelodysplasia, but this has not been confirmed in two larger series of patients with myelodysplasia.⁵ The increased familial risk of myelodysplasia might be the result of common environmental factors or inheritance, or both.

Expected number of first degree relatives with myelodysplasia during six years of study

Age (years)	No of patients with myelodysplasia on register	Population* (millions)	Incidence/ million/year	No of first degree relatives calculated to be at risk				Expected No of first degree relatives with myelodysplasia in six years
				Offspring†	Siblings‡	Parents‡	Total	
20-34	9	0.29	5	27×2	9×2		72	0.002
35-44	7	0.18	6	52×2	7×2		118	0.004
45-54	9	0.15	10	63×3	9×2	4×2	215	0.01
55-64	36	0.16	38	31×3	36×2	8×2	181	0.04
65-74	69	0.12	96	4×3	69×3	8×2	235	0.14
75-84	56	0.07	133		56×2	23×2	158	0.13
≥85	7	0.02	58		7×1	52×1	59	0.02
Total	193	0.99	32	452	448	138	1038	0.35

*From Office of Population Censuses and Surveys.

†Estimated from average family size.

‡Adjusted for mortality.

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