Acute viral hepatitis B: laboratory reports 1980-4

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Reports of patients with acute clinical hepatitis B have been received from laboratories in England, Wales, and Ireland since 1972. All available evidence suggests that since 1975 these reports include most of the cases of acute hepatitis B infection, in England at least.[1-3]

The annual number of reports, which was about 1000 in each of the years 1975 to 1979, increased during the next five year period to more than 1200 in 1981, 1982, and 1983, with a sharp rise to almost 2000 in 1984 (table I).

TABLE I—*Acute viral hepatitis B: laboratory reports 1980-4*

	1980	1981	1982	1983	1984	Total
Men	715	888	895	902	1400	4800
Women	274	320	340	326	580	1840
Total*	1004	1217	1244	1236	1995	6696

*Includes patients for whom sex was not stated.
Note—The large increase in the number of reports in 1984 was not sustained in 1985, when the total number of patients was similar and the percentage of patients with a history of drug abuse was the same.

The age and sex distributions of the patients, which varied little from year to year, remained similar to those found in the previous five years—that is, almost three quarters of the patients were men and, among patients of both sexes, about three quarters were young adults. Acute clinical hepatitis B remained uncommon among children and the elderly.

Based on these reports, the incidence of hepatitis B infections in adults aged 15-64 years was 6 per 100 000 for men and 2 per 100 000 for women. Compared with the corresponding rates in 1975-9, the incidence for men increased by 50%, but the rate for women remained the same.

Thirty four deaths were reported: hepatitis was the cause in 30. Among adults aged 15-64 case fatality rates were higher for women (0·6%) than for men (0·3%). The lowest rate (0·3%) was found in patients aged 15-34 years; there was an increase of 1·2% in patients aged 35-64 years, and 2·0% at 65 or more years. There were two deaths among the 72 children.

Relevant histories

The hepatitis report form includes specific inquiries about health service occupation and recent history of drug abuse, bleeding disorders, transfusions, tattooing, patients in institutions for the mentally handicapped or renal units, injections, dentistry, surgery, travel abroad, or contact with cases or carriers. The histories reported are not necessarily causally associated. Of the 6696 reports, 62% included details of one or more of these histories.

As in 1975-9, drug abuse was the most common history. The increase in the annual total of patients in 1981 and again in 1984 was directly associated with an increase in the number of patients with a history of drug abuse (table II). Of the 1566 patients with a history of drug abuse reported during the five years, only 319 (20%) were women.

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TABLE II—*Patients with acute hepatitis B with a history of drug abuse as a percentage of total cases 1980-4*

	1980	1981	1982	1983	1984	Total
Drug abusers as % total cases	17·8	22·2	20·7	22·9	30·4	23·9

Male homosexuals formed 8% of all patients during the period (table III). From 1982 there was a sustained increase in this number, so that by 1984 there were twice as many as in 1980.

TABLE III—*History of patients*

History	Patients	
	No	%
Drug abuse	1597	23·9
Male homosexual*	520	7·8
Contact with case or carrier†	626	9·3
Bleeding disorder	31	0·5
Transfusion	82	1·2
Tattoo	91	1·4
Patient in institution for the mentally handicapped	55	0·8
Health service staff	361	5·4
Surgery, dentistry, or injection	208	3·1
Abroad (without any of histories specified above)	640	9·6
Total with history or relevant occupation	4180	62·4
Total reports	6696	

*31 male homosexuals who were also drug abusers were included in both groups.
†Excludes health service staff and drug abusers or male homosexuals with a history of contact.

Drug abusers, male homosexuals, and health service staff were excluded from the 626 patients with a history of contact with a case or carrier, who formed 9% of the total. Of these exposures, 366 (59%) were heterosexual, 63 (10%) were household, and the remainder were other or not specified. Some of the household exposures may have been sexual because the relationship between patient and contact was often unspecified. Most of the patients with a history of heterosexual contact with cases or carriers were women, but 116 (32%) were men.

Most of the infections were sporadic, but 11 patients were infected in two outbreaks associated with surgery. These are reported in the accompanying paper (p 33).

The endemic pattern of hepatitis B infection in many institutions for the mentally handicapped was similar to that in 1975-9. The infections of 55 patients and 43 staff were usually sporadic and were associated with carriers rather than other acute infections. There were no reports of outbreaks in renal units.

Acute hepatitis B infection in health service staff

During the five years 364 cases of acute clinical hepatitis B in health service staff were reported, considerably more than the total of 287 reported in 1975-9. In 1980-4, however, 80 (22%) acquired the infection while working abroad, whereas only 9% had done so in 1975-9.

Although specific immunoglobulin continued to be available throughout the period, most of the infected health service staff had either failed to report or were unaware of their exposure. Thirteen (0·8%) of the infections occurred despite prophylaxis. There were only two reports of infections in staff working in renal units, both of whom were physicians. One had taken repeated blood samples from

TABLE IV—*Acute hepatitis B among health service staff* (England only)*

Staff category	1975-9			1980-4		
	Mid-period number	No of reported cases of acute hepatitis B	Average annual rate per 100 000	Mid-period number	No of reported cases of acute hepatitis B	Average annual rate per 100 000
Surgeons	10 372	6	12	11 282	14	25
Physicians	43 828	27	12	47 900	26	11
Laboratory staff:						
Medical	2 232	3	27	2 490	2	16
Scientific	14 291	13	18	15 339	28	37
Nursing staff	391 953	131	7	423 841	95	4
Dentists	14 354	12	17	15 337	13	17
Staff in institutions for mentally handicapped	28 000	43	31	39 163†	52	27

*Staff who acquired the infection while working abroad were excluded from both five year periods.
†Figures supplied by the Department of Health and Social Security. The 1980-4 mid-period number includes staff in small community units, who are not included in 1975-9.

a patient who had undergone a transplant operation who was a known highly infective carrier, but she could not recall any accidental inoculation or contamination. The other worked in a unit in which there were no carrier patients; the time of the onset suggested that the infection had been acquired before beginning work in the unit. None of the infections in health service staff were fatal.

Table IV shows the average annual incidence of hepatitis B estimated for the various staff groups. The denominators are derived from *Health and Personal Social Services Statistics for England* 1982.[4] Actual numbers of staff were used when available; otherwise whole time equivalents were used. Since data for Wales and Ireland are presented differently, rates were estimated for England only.

The rates for staff of institutions for the mentally handicapped during the two periods are not comparable as the number of staff in 1980-4 was considerably increased by staff in small community units, who were not included in the figures for 1975-9. The rate for nurses decreased from 7 per 100 000 in 1975-9 to 4 per 100 000 in 1980-4. There was little or no difference between the rates for physicians and dentists. The rates for surgeons and laboratory scientific staff were twice as high as those found in 1975-9.

Although the increased incidence during 1980-4 in two groups is a cause for concern, the annual average numbers of infections, on which these rates were based, were small—for example, three surgeons, six laboratory staff. Nevertheless, these infections should be prevented by active immunisation of staff at high risk.

References

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Lesson of the Week

Resolution of dyskinesia and the "on-off" phenomenon in thyrotoxic patients with Parkinson's disease after antithyroid treatment

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Many patients with Parkinson's disease develop complications of long term treatment with compounds containing levodopa. These complications include the "on-off" phenomenon and dyskinesia and develop after two or three years of treatment in some 15-40% of patients.[1] Thyrotoxicosis has been reported in association with Parkinson's disease in patients with severe tremor, and in three cases the tremor subsided with treatment of the endocrine disorder.[2] I report two patients who developed late side effects of treatment of Parkinson's disease which were reversed by correcting co-existing thyrotoxicosis and examine the postulated mechanism.

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Symptoms and signs of thyrotoxicosis may easily be dismissed as late complications of levodopa in patients receiving this drug for Parkinson's disease; only a high index of suspicion and a therapeutic trial of antithyroid medication will yield the correct diagnosis

Case 1

A 66 year old woman with a seven year history of Parkinson's disease well controlled for four years with levodopa-carbidopa (Sinemet) presented with a four month history of night terrors, depression, dyskinetic movements, and episodes of freezing typical of the "on-off" phenomenon. She admitted