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Incidence of transfusion associated B and non-A, non-B hepatitis in Italy

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Screening of donated blood for hepatitis B surface antigen and for serum alanine aminotransferase concentration has been performed in Italy since the early 1970s. Screening for other surrogate markers, such as antibody to hepatitis B core antigen has never been done. Screening for antibodies to hepatitis C virus was routinely done in a few blood banks since 1990; it became compulsory in 1991. Second generation enzyme linked immunosorbent assay (ELISA) was introduced in 1992 in all blood banks.

Using data from the surveillance system for acute viral hepatitis (SEIEVA), we have evaluated the incidence of transfusion associated B and non-A, non-B hepatitis in Italy from 1987 to 1993.

Methods and results

SEIEVA, which is coordinated by the Istituto Superiore di Sanità in collaboration with health districts, started in 1985.¹ From 1985 to 1993 the number of health districts participating in SEIEVA has greatly increased, in 1992 covering about 40% of the Italian population. SEIEVA uses weekly notification of cases and a standard questionnaire for data collection on risk factors.

Patients with acute hepatitis with hepatitis B surface antigen and IgM antibodies to hepatitis B core antigen, without antibodies to hepatitis A, are classified as having hepatitis B. Those without IgM antibodies to hepatitis B core antigen and without IgM antibodies to hepatitis A are classified as having non-A, non-B hepatitis. Tests for IgM antibodies to hepatitis B core antigen have been available since 1987. Assays of hepatitis markers are performed in different laboratories scattered all over the country. No changes were made in the notification system during the study period.

Using as denominators the catchment populations of the participating health districts, incidence rates per 1 000 000 of notified cases of transfusion associated hepatitis decreased from 1.4 in 1987 to 0.5 in 1992 for hepatitis B and from 4.4 in 1987 to 0.3 in 1992 for

Incidence rates per 1 000 000 of notified cases of hepatitis B and non-A, non-B with history of blood transfusion in Italy 1986-93

Year	Hepatitis B	95% confidence interval	Hepatitis non-A, non-B	95% confidence interval
1987	1.4	(0.7 to 2.1)	4.4	(3.2 to 5.6)
1988	1.4	(0.8 to 2.0)	4.5	(3.5 to 5.6)
1989	1.8	(1.1 to 2.4)	4.1	(3.1 to 5.1)
1990	0.9	(0.5 to 1.4)	2.9	(2.1 to 3.7)
1991	0.8	(0.4 to 1.3)	1.4*	(0.8 to 2.0)
1992	0.5	(0.2 to 0.8)	0.3†	(0.1 to 0.6)
1993	1.0	(0.6 to 1.5)	0.4	(0.2 to 0.7)

*ELISA-I screening introduced by law in all blood banks.

†ELISA-II screening introduced.

ELISA=Enzyme linked immunosorbent assay.

non-A, non-B hepatitis. Although for hepatitis B the incidence increased from 1992 to 1993, the 95% confidence intervals for these periods overlapped. For non-A, non-B hepatitis the low 1992 rate remained virtually unchanged in 1993. Compared with 1989, the incidence of cases of non-A, non-B hepatitis reporting blood transfusion decreased from 4.1 per 1 000 000 in 1989 to 2.9 in 1990 (−29%), when screening with first generation ELISA (ELISA-I) was routinely done in a few blood banks, to 1.4 in 1991 (−66%) when this screening became compulsory, and to 0.3 (−93%) in 1992, after ELISA-II was introduced.

Comment

Our findings show a small residual risk of transfusion associated hepatitis B and indicate the effectiveness of the screening policy for antibodies to hepatitis C virus in reducing the incidence of cases of non-A, non-B hepatitis after blood transfusion.

Because the viral surface antigen may be present in the serum at a low concentration or may be masked in immune complexes, it has been shown² that blood donors testing negative for hepatitis B surface antigen may transmit hepatitis B virus infection.² Transfusion with "HBsAg negative" blood is thus a potential source of infection.

Cohort studies from Japan³ and the USA⁴ have documented decreases of 60 to 80% in the incidence of post-transfusional non-A, non-B hepatitis after the implementation of donor screening for antibodies to hepatitis C virus by ELISA-I in addition to, or at the same time as, screening for surrogate markers. A recent report from Spain has shown that for antibodies to hepatitis C virus testing by ELISA-II further reduces the incidence of non-A, non-B hepatitis by 57% when compared with ELISA-I.⁵ Although information obtained through passive surveillance is likely

to be less accurate than data from these cohort studies, we found similar decreases after starting donor screening policies for antibodies to hepatitis C virus in Italy (-66% and -93% after introduction of ELISA-I and ELISA-II, respectively). These findings suggest that, although non-notified or asymptomatic blood associated cases of non-A, non-B hepatitis may still occur, in Italy the current risk is likely to be very low.

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Prevalence of alcohol histories in medical and nursing notes of patients admitted with self poisoning

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Preventing suicide and reducing excessive drinking are both priorities in the *Health of the Nation*.¹ Chronically excessive alcohol consumption is common among patients attempting suicide, many of whom also take alcohol as part of a self poisoning episode.² Questioning patients admitted to hospital with self poisoning about their alcohol consumption is therefore important, both to the management of their overdose and to identify excessive drinkers for later advice and follow up. We surveyed inpatients' notes to assess whether patients who had poisoned themselves had had their alcohol intake assessed.

Subjects, methods, and results

As part of the evaluation of a training intervention to improve the management of excessive alcohol consumption among inpatients, we examined the medical and nursing notes and discharge summaries of consecutive patients admitted over 28 weeks to four general medical wards at a large teaching hospital. We recorded, among other items, the reason for admission and whether the notes and discharge summaries contained a quantified alcohol history, defined as a numerical record of consumption (including no consumption of alcohol). Knowledge of the reason for admission could have biased the researcher's recording of the alcohol history, but this is unlikely, as the researcher examining the notes was not aware of the hypothesis that the two processes would be related. Patients were excluded if they could not speak English, were unconscious on admission, were less than 18 years old, were admitted as a day case, or were admitted on a second or subsequent occasion during the study. Men recorded as drinking more than 21 units a week and women recorded as drinking more than 14 units a week were regarded as excessive drinkers.

A total of 2680 patients were admitted during the study, 1955 (73%) of whose notes were examined and details of reason for admission and recorded alcohol history extracted. One hundred and forty five patients were admitted with self poisoning, 59 men and 86 women. Their ages ranged from 18 to 90 years (median 31). Fifty three of them had taken alcohol with their overdose of drugs. Only 37 had a quantitative alcohol history recorded in their medical notes, and 25 had a history recorded in their nursing notes, leaving 99 with no record in either set of notes. As shown in the table, patients admitted with self poisoning were less likely to have a quantitative alcohol history recorded than those admitted for other reasons. Only four of the 53 patients with self poisoning who took alcohol with their overdose had discharge summaries that mentioned their excessive drinking.

Comment

We found that less than a third (46/145) of the patients admitted with self poisoning had quantitative alcohol histories recorded in their medical or nursing notes and that they were less likely than other patients to have such a history recorded. This may be because of the attitude of ward staff to this group of patients,³ who are sometimes seen as less deserving of thorough assessment and care. Yet there are several reasons why patients with self poisoning should particularly have quantitative alcohol histories taken and notification sent to their general practitioners. Their overdose may be mismanaged if their chronic and acute alcohol consumption is not taken into account, particularly in the case of paracetamol poisoning, which is common and has a complex interaction with alcoholic liver damage. Brief advice to reduce consumption is effective⁴ yet cannot be given without eliciting quantitative alcohol histories. Treatment for problem drinking with appropriate support can prevent repeat episodes of self poisoning.⁵ General practitioners may wish to prescribe differently to patients whom they know to be at risk of misusing drugs in conjunction with alcohol.

Admission to hospital with self poisoning indicates increased risk of excessive and problem drinking, and these patients should be more, not less, likely to receive thorough assessment of their alcohol consumption.

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Numbers (percentages) of alcohol histories in medical and nursing notes of patients admitted with and without self poisoning

	Doctors' notes*		Nurses' notes†	
	Quantitative alcohol history	No quantitative alcohol history	Quantitative alcohol history	No quantitative alcohol history
Reason for admission:				
Self poisoning (n=145)	37 (26)	108 (74)	25 (17)	120 (83)
Not self poisoning (n=1810)	680 (38)	1130 (62)	459 (25)	1351 (75)

* $\chi^2=7.88$, $P=0.005$ for proportion of notes with qualitative alcohol history, patients admitted with self poisoning v those admitted without self poisoning.
† $\chi^2=4.32$, $P=0.04$ for proportion of notes with qualitative alcohol history, patients admitted with self poisoning v those admitted without self poisoning.

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