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Post-transfusion hepatitis in Trent Regional Health Authority, 1988

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Post-transfusion hepatitis still occurs in the United Kingdom despite the introduction of sensitive assays for hepatitis B surface antigen. Only a small proportion of cases of hepatitis transmitted by transfusion is recognised by doctors and reported to regional transfusion centres.¹ Furthermore, non-A, non-B hepatitis is the predominant type transmitted by transfusion and probably accounts for more than 90% of cases.² We studied all cases of suspected post-transfusion hepatitis reported to this centre in one year and investigated the donors in these cases for markers of hepatitis infection.

Subjects, methods, and results

During 1988 six cases of suspected post-transfusion hepatitis were reported to this centre; five were cases of hepatitis B and one of non-A, non-B hepatitis. Three of

the cases of hepatitis B infection formed a cluster in one hospital in the region, and investigations performed by the Public Health Laboratory Service yielded a common source of infection not related to blood transfusion. These three cases were therefore not due to transfusion. The infection in the other three cases seemed to have been transmitted by transfusion.

The donors implicated in all six episodes were contacted and samples obtained for testing for markers of hepatitis B infection. Samples were obtained from 16 of the 17 donors either in response to postal contact or after redonation; one donor (case 1) did not respond to postal contact. The table gives the results. Hepatitis B surface antibody was sought only in donors positive for hepatitis B core antibody. In addition, alanine aminotransferase activity was measured in the two donors who might have transmitted non-A, non-B hepatitis infection; it was within the normal range in both.

In each of the three cases of disease probably related to transfusion one donor was shown to be positive for hepatitis B core antibody. Furthermore, in the two cases of hepatitis B probably related to transfusion the donors positive for hepatitis B core antibody gave histories of acute hepatitis two to three years before donation.

Comment

Transmission of hepatitis B by transfusion of blood negative for hepatitis B surface antigen but positive for hepatitis B core antibody has been reported.³ Donors who are negative for hepatitis B surface antibody have been shown to confer the greatest risk, but there is circumstantial evidence of transmission of hepatitis B by donors with both hepatitis B core antibody and low levels of hepatitis B surface antibody.⁴ Screening for hepatitis B core antibody and measurement of alanine aminotransferase activity are used in many countries to determine whether a subject may be a carrier of non-A, non-B hepatitis.² In the United Kingdom testing for hepatitis B core antibody is currently recommended only as follow up in cases of suspected post-transfusion hepatitis.

Although the number of cases we have reported is small, our findings are interesting as, firstly, in both cases of hepatitis B infection transmitted by transfusion a donor was positive for hepatitis B core antibody and

Results of serological testing for markers of hepatitis infection in donors who had donated blood given to six patients who developed hepatitis B or non-A, non-B hepatitis

Results of serological testing of donors for:						
Case No	Type of hepatitis	No of donors	Hepatitis B surface antigen	Hepatitis B core antibody	Hepatitis B surface antibody	History of hepatitis in donors
<i>Hepatitis not transmitted by transfusion</i>						
1	B	4	3 Negative, 1 ND	2 Negative, 2 ND	ND	No
2	B	1	Negative	Negative	ND	No
3	B	2	2 Negative	2 Negative	ND	No
<i>Hepatitis probably transmitted by transfusion</i>						
4	B	4	4 Negative	3 Negative 1 Positive	ND Negative*	No Yes
5	B	4	4 Negative	3 Negative 1 Positive	ND Negative*	No Yes
6	Non-A, non-B	2	2 Negative	1 Negative 1 Positive	ND Weakly positive	No

ND=Not done.

*Result negative by haemagglutination test but low levels of antibody detected by radioimmunoassay.

had a history of hepatitis; and, secondly, in the three cases of infection not transmitted by transfusion all the donors were negative for hepatitis B core antibody.

Blood donations are accepted by the National Blood Transfusion Service 12 months after an episode of jaundice or hepatitis in the donor so long as testing for hepatitis B surface antigen yields negative results. In the light of our findings and recent legislation relating to product liability we believe that this policy should be reassessed and that consideration should be given to

testing such donors for hepatitis B core antibody and excluding them if they are found to be positive.

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Surgical footwear: a survey of prescribing consultants

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Changes are likely to occur in the present system by which patients obtain special footwear because of alterations in contractual aspects and the introduction of new technology such as digital shape capture and computerised design.^{1,2} Continuous, central records are not kept on the provision of footwear, though we have conservatively estimated that costs across the United Kingdom in 1986 were about £12 million. As a basis for the introduction of technological changes more information on the present system would be advantageous. Previous surveys have concentrated on the views of consumers.^{3,4} We present a report on a survey into the system of supplying footwear from the point of view of most consultants in the United Kingdom who prescribe and accept the footwear—namely, those in diabetology, orthopaedics, and rheumatology and rehabilitation.

Methods and results

A questionnaire requested background information about type of clinics, the current organisation of the delivery service, delegation in an ideal world, and respondents' perception of aspects of the service. We sent out 1696 questionnaires and 821 (48.4%) were returned, response rates being 176/430 (40.9%), 469/983 (47.7%), and 176/283 (62.2%) for diabetologists, orthopaedic surgeons, and rheumatologists respectively; 285 respondents volunteered written comments.

Many written comments emphasised dissatisfaction with the speed of delivery (table) with further indications on the desirability of a permanent workshop within the hospital or more frequent visits by fitters. With traditional methods of production this probably cannot be much improved. Even when factories meet the suggested maximum turn around time of six weeks from receipt of cast or measures to dispatch for trial fitting the overall supply time is probably too long by clinical criteria. The growing awareness of the availability of stock orthopaedic shoes may influence the future pattern of prescription. Use of off the shelf shoes of extra depth circumvents delays in fitting and provides a cheaper and more cosmetically acceptable alternative. Over a fifth of all consultants were dissatisfied with the suitability of the footwear (table). In addition, the cosmesis of surgical shoes was sometimes seen as poor. Some consultants suggested that free shoes may lead to abuse of the system and that a nominal charge should be made. The relationship between the consultant and fitter or patient and fitter was often commented on; many thought that a close relationship was needed. A general frustration

with both logistic and training aspects was evident. There was evidence that financial pressures may be detrimental. The best contractor is sometimes the most expensive, and a change of contractor—often not necessarily in the patients' best interest—is occasionally initiated by restrictions on costs.

Responses to questions "Are you generally satisfied that footwear is suitable in practice for the purpose for which it is prescribed?" and "Are you generally satisfied with the speed of production of footwear?"

Specialty	No (%) of consultants satisfied with:	
	Suitability	Speed
Diabetology	123/171 (72)	81/120 (48)
Orthopaedics	368/464 (79)	251/462 (54)
Rheumatology and rehabilitation	123/176 (70)	69/176 (39)

Chiropodists play an important part in supplying footwear for diabetic patients, and diabetologists reported closer links with chiropodists than did other groups of consultants. Analysis of the data showed considerable geographical variations. Under a third of consultants were satisfied with speed in North West Thames compared with two thirds in the Northern region. Satisfaction with suitability varied from just over half in North West Thames to nearly complete in the Northern region.

Comment

With the event of clinical accounting in NHS hospitals consultants' requirements for the supply of footwear will become even more important in determining the contractor and type of footwear. Consultants have clearly indicated improvements necessary in the supply of surgical footwear, primarily in the speed of delivery, fitting, training of staff, and perhaps, in some cases, rationalisation of the system. Some concern was expressed over changes in contractors because of economic rather than clinical reasons. Under direct budgetary control criteria will tend towards cost-benefit rather than cost or benefit alone.

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