the Italian cases a faulty water supply has been implicated.[1] However, viral contamination of implicated batches, confirmed by polymerase chain reaction or animal infectivity studies, has not been established. Nor has hepatitis A virus infection by associated red cell donations been reported. Clinical hepatitis A virus infection, ascribable to factor VIII concentrate, has not been found in the other countries represented at the meeting and specific assays have revealed only nine seroconversions in more than 400 patients with haemophilia A (ascribed to community factors) in the past five years. Furthermore, the age related prevalence of hepatitis A virus antibody, in more than 1200 haemophilic patients, was similar to or less than that in the general population. Most reports related to factor VIII products prepared by using solvent detergent treatment combined with ion exchange chromatography, although similar data are available for pasteurised products[5] and products monoclonally purified with solvent detergents.

Transmission of hepatitis A virus by factor VIII, if it occurs at all, is a rare event, as is true of transmission by single donor blood products.[6] This is supported by the lack of raised concentrations of alanine aminotransferase, a marker of hepatitis, in numerous trials of current factor VIII products in previously untreated patients, apart from one case in Italy.[7]

Data were also presented for the absence of hepatitis A virus nucleic acid from 77 batches of factor VIII treated with solvent detergent. In addition, evidence was given that hepatitis A virus is cleared by a combination of antibody neutralisation, differential precipitation, and freeze drying during the prepartion of factor VIII.

Although solvent detergent treatment is ineffective in inactivating non-enveloped viruses,[8] current data suggest that hepatitis A virus transmission by factor VIII concentrates is not a major problem. Most of those present in Edinburgh concluded that, although research into additional viral inactivation or clearance procedures should be pursued vigorously, caution should be exercised in adopting such approaches until they have been fully evaluated for safety and efficacy.

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Should susceptible homosexual men be offered immunisation?

EDITOR,—From evidence of an increasing incidence of rectal gonorrhoea and HIV-1 infection in homosexual men B G Evans and colleagues have concluded that unsafe sexual behaviour has increased after a period of decline.[1] Hepatitis A virus infection is also a significant risk to homosexual men. The virus is spread by the faeco-oral route and may be transmitted by oral-anal contact.[2] Several reports have documented an increase in hepatitis A infections in homosexual men in the United Kingdom,[3] the United States, Canada, and Australia.[4]

Numbers (percentages) of cases of hepatitis A virus infection, 1989-92

	Men				
	Homosexual	Heterosexual	Women	Children	Total
1989	4 (9)	15 (33)	13 (29)	13 (29)	45 (100)
1990	10 (18)	15 (27)	11 (20)	19 (35)	55 (100)
1991	23 (48)	11 (22)	7 (15)	7 (15)	48 (100)
1992	28 (48)	15 (30)	9 (17)	6 (13)	58 (100)
Total	65 (32)	56 (27)	40 (19)	45 (22)	206 (100)

The table shows the cases of hepatitis A virus infection presenting to our laboratory, which serves a large genitourinary medicine clinic as well as inner city general practitioners. Infection was confirmed by the presence of IgM specific to hepatitis A (Abbott MEIA IgM capture test). All patients had a clinical illness consistent with hepatitis.

The rise in hepatitis A virus infection seen in homosexual men presenting to the clinic over the past four years may be due to the increased use of oral-anal contact in the hope of reducing HIV transmission[3] or to a general increase in promiscuity in this group. It is important, therefore, that advice given on homosexual practices to avoid HIV infection should also take hepatitis A virus infection into account because of the different routes of transmission of the viruses.

A vaccine inactivated by formaldehyde (Havrix, SmithKline Beecham) prepared from the HM175 strain of hepatitis A virus has recently been licensed for use in the United Kingdom, but its routine use in homosexual men is not recommended at present. The Department of Health guidelines state that there are currently no data to support routine immunisation in this group.[5] However, with accumulating evidence of increasing hepatitis A virus infection in homosexual men and the increased morbidity associated with hepatitis A virus infection in adults compared with children, serious consideration must now be given to offering hepatitis A virus vaccine to homosexual men. Screening to identify susceptible individuals should be done before vaccination because of the cost of the vaccine (£27.20 for a primary course).

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The Hawksley random zero sphygmomanometer

Comparison with mercury instrument is illogical

EDITOR,—The provocative article by Rónán M Conroy and colleagues[1] has created remarkable irritation in the cardiovascular research community.[2] I would like to draw attention to an aspect that has been neglected—namely, the validity of testing the random zero against the standard mercury sphygmomanometer.

Random zero sphygmomanometers were introduced in 1970 by Wright and Doré because researchers wanted to improve the quality of blood pressure measurement with the standard mercury device. Contrary to the frequently stated misconceptions that the random zero device reduces last digit preference (which it was not intended to do),[3,4] "the main purpose of the instrument was to eliminate bias from preconceived ideas and to make blind duplicate readings possible."[5] Whatever the direction of observer bias—whether resulting in overestimation or underestimation of true values—the readings obtained with a random zero sphygmomanometer are intended to be different from those taken with the standard mercury sphygmomanometer. It is therefore illogical to use the standard mercury device as the reference against which the Hawksley instrument is tested. If the Hawksley random zero instrument is doing what it is supposed to do—that is, improving the validity of replicate measurements —then it is expected to produce lower systolic and diastolic pressures than the standard mercury sphygmomanometer. Thus the observation of such a difference must not be taken as an argument against the use of a random zero sphygmomanometer.

According to the overwhelming available evidence,[2,3] however, this difference is much smaller than that found by Conroy and colleagues. The authors did not even attempt to present reasonable explanations for their amazing quantitative observations. Thus I am not surprised that John Garrow and Carolyn Summerbell, in what seems to have been a reproducible video assessment, were unable to replicate the findings.[2] I believe that Conroy and colleagues' article has caused confusion by challenging established medical practice on unsteady scientific grounds.

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Authors' reply

EDITOR,—We are gratified that our paper has generated critical debate.[1] We are asked where the source of error lies. It might lie with the observers, the device, the patient, or a combination of these.

Were our observers misusing the Hawksley device? We hardly think so. Not only were they trained to meet the stringent requirements of the British Hypertension Society's protocol but they were also carefully instructed in the proper use of the device. We had anticipated the criticism of observer prejudice, and the observers were not told the purpose of the study.