over eight years, which could not now be repeated as an untreated control would be considered unethical. Mortality data from the trial showed a significant reduction in fatal myocardial infarction in the treatment group.[3] The reduction in serum cholesterol concentration observed is of a magnitude which should be advantageous.[5]

We conclude that tamoxifen significantly reduces the serum cholesterol concentration in postmenopausal women with breast cancer. This drug, used to control one major cause of mortality in women, is found to be benefiting risk factor status for another. It may be worth exploring the potential of tamoxifen or its analogues as cholesterol lowering agents.

The Scottish adjuvant tamoxifen trial was administered by the Scottish Cancer Trials Office, Edinburgh, with support from the Medical Research Council, Cancer Research Campaign, and ICI. The serum bank was established by Professor A Cuschieri and maintained with the help of Dr and Mrs P R Baker, Miss E Michel, Dr E L Newman, Mr G Smith, and Mr A Reid. We thank Miss A Lee for statistical advice.

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Midwifery and body fluid contamination

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Midwives and obstetricians often come into contact with human body fluids that are known means of transmitting several viral diseases including hepatitis B virus and HIV. Professional bodies, including the Royal College of Obstetricians and Gynaecologists, have issued guidelines to minimise the risk of contamination with body fluids.[1] We conducted this study to assess the efficacy of current methods for minimising contamination of skin of attendants at delivery with mothers' body fluids.

Patients, methods, and results

We examined 226 doctors and midwives for contamination and skin breaks immediately after artificial rupture of membranes, delivery or helping at a delivery, repair of episiotomy, and caesarean section.

The table shows the numbers contaminated on the hands, arms, and face. Of the 103 practitioners conducting vaginal deliveries 99 wore gloves and 87 gowns. Only 46 of the 59 assistants at delivery wore gloves and 44 gowns, which may explain the high rate of contamination of hands (34%) among assistants. Overall, about half of these two groups were contaminated on the arms or hands. Eight of the 28 surgeons performing caesarean sections were contaminated despite wearing gloves, aprons, and cotton gowns. Overall, 95 staff were contaminated on their hands or arms, or both. This suggests that protective measures, including the use of gloves and gowns, were inadequate and ineffective.

Fifty one staff had broken skin, of whom 22 were contaminated with blood; six of 17 staff not wearing gloves had broken skin.

Numbers (percentages) of doctors and midwives with body fluids on hands, arms, and face

Procedure	No of practitioners	No contaminated: Hands	Arms	Face	Total
Delivery of baby	103	21 (20)	42 (41)	7 (7)	52 (50)
Taking of baby	59	20 (34)	16 (27)	5 (8)	25 (42)
Perineal repair	25	4 (16)	2 (8)	1 (4)	4 (16)
Caesarean section	28	5 (18)	4 (14)	5 (18)	8 (29)
Artificial rupture of membranes	11	3 (27)	4 (36)		6 (55)
Total	226	53 (23)	68 (30)	18 (8)	95 (42)

Comment

Midwives and obstetricians come into contact with body fluids so often that they may become complacent about the dangers. Those conducting or assisting at deliveries had the heaviest contamination. Perineal repair was associated with the least contamination because little fluid splashes about and the procedure is not carried out hurriedly. Although the least protected, the face was the least contaminated (8·0%). This contrasts with contamination in orthopaedic surgeons, who run high risks of facial splashes.[2]

The 23% incidence of broken skin is worrying, especially as 35% were not wearing gloves. Recent figures show that in some London districts 1 in 300 pregnant women are HIV positive and about 1% are infected with hepatitis B virus.[3] Most skin breaks were on the hands and especially the nail beds.

Langerhans cells in the epidermis are target cells and vehicles for the transmission of HIV.[4,5] These cells are thought to present the antigen (HIV, bacteria, and other viruses) to T lymphocytes and may facilitate infection with HIV through skin breaks. Langerhans cells are found in the skin and mucous membranes, including oral, vaginal, and cervical epithelium. Braathen *et al* concluded that the assumption that HIV infection occurs exclusively by entry of virus through wounds in skin and mucous membranes into the blood is no longer valid.[4]

Our study shows that the current practices of preventing contamination are inadequate and that staff may be at risk of contracting viral diseases while practising obstetrics. Effective methods to improve protection and reduce the risk of infection are being studied.

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Correction

Oestrogen replacement after oophorectomy: comparison of patches and implants

Two errors occurred in this short report by C Harriet M Anderson and others (11 July, pp 90-1). In the first row of the table (age) the 95% confidence interval of the difference between the means should be −2·7 to 6·4 and the p value should be >0·1.