clinical suspicion of marrow relapse. A multihole aspiration needle such as the one described here would have permitted the withdrawal of marrow from many different areas at the same time (Fig. 2b) and the recognition of relapse could have been made earlier.

The posterior iliac spinous area is the thickest and largest marrow-containing area in the child and adult. It is easily accessible and large amounts of red marrow can be obtained. The mass of bone in this region is also distant from any important structures; complications are unlikely and as the patient cannot see the procedure, the anxiety associated with sternal puncture is avoided.

The present aspiration needle was designed to be used on the posterior ilium and to overcome the sampling error inherent in the technique of bone marrow aspiration. The advantageous features of the new needle are as follows: (i) the three-edged, sharp-pointed cutting tip of the stilette easily penetrates the soft tissue as well as the bony cortex and does not require resharpening after each use; (ii) the large metal bar at the proximal end of the needle permits a secure and firm grip, while the smooth dome shaped handle fits easily in the palm of the hand so that there is no discomfort even when forceful thrusting is necessary; (iii) the most important feature of the instrument is the carefully tooled distal 17-5 mm portion of the needle with multiple holes in addition to the opening at the front end of the needle. This permits the aspiration of large quantities of marrow if required for harvesting, and increases the chance of securing a representative sample for diagnosis.

I wish to thank Mr DR Bevan of Downs Surgical plc for his useful advice and keen interest in the development of this instrument.

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Letters to the Editor

The Howie code: is the price of safety too high?

Dr Whale1 plays down the risk of encountering infectious tuberculosis post-mortem. In the mortuary at this hospital, in the last 2½ years, during which about 750 necropsies were performed, I have encountered five instances of pleural/pulmonary tuberculosis in which acid-fast bacilli were easily found microscopically. None of the deceased had been having steroids or cytotoxic drugs, and only one was non-Caucasian. In only one case was there a history of tuberculosis (that history relating to illness in the 1930s) and in no case had tuberculosis been suggested as a cause of death. In fact, in two of the cases I did not feel that tuberculosis had contributed to death at all.

In several other cases detailed dissection of possible tuberculous lesions had been necessary to exclude the possibility of active tuberculosis. This is not just an academic exercise; the finding of active possibly "open", pulmonary tuberculosis has implications for contacts at home and at work, and, increasingly frequently, for those involved in attempted resuscitation in cases of sudden death. Furthermore, the presence of possibly tuberculous tissue or fluids remaining in the body after necropsy necessitates warning undertakers against opening the body again for embalming.

In the light of current DHSS recommendations, the simplest course undoubtedly would be not to become involved in tuberculous necropsies. Unfortunately, however, most cannot be predicted, and, when possible signs of pulmonary tuberculosis are found, there are good reasons for thorough examination, as opposed to closing the body as soon as possible. Regarding the frequency of tuberculosis in this country, notification of respiratory tuberculosis fell only slightly between 1971 and 1979, while notifications of non-respiratory tuberculosis remained almost constant.2 These considerations, coupled with personal knowledge of several acquaintances in morbid anatomy who have had tuberculosis, confirm my view that tuberculosis is by far the most important infective hazard of mortuary work. Whether the

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number of air changes per hour in the PM room really diminish the hazard is another matter.

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References


I must take issue with Dr Whale\(^1\) regarding the number of infectious TB cases likely to be encountered annually in the post-mortem room. The figures that she quotes are for those cases in which tuberculosis is given as the cause of death; they do not include the cases in which TB is either not the principal cause of death or is found incidentally. The latter cases, in which pulmonary TB unexpectedly turns up in a coroner’s necropsy, usually in an elderly subject, are by no means uncommon; I have personally performed two such necropsies in the past 18 months, confirmed by positive cultures.

Professor Grist’s continued survey\(^2\) shows quite clearly that there is an increased risk of TB in morbid anatomists and mortuary technicians, and I am sure that I am not alone in being personally acquainted with cases of tuberculosis almost certainly contracted in the post-mortem room.

It is only recently that any interest at all has been taken in post-mortem room safety, and it is hardly surprising that mortuary ventilation systems are still relatively undeveloped. I would also add that, quite apart from the infection issue, adequate ventilation considerably reduces necropsy odours, which, contrary to popular belief, are as offensive to the nostrils of morbid anatomists as to anyone else’s.

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Dr Whale replies as follows:

I appreciate Dr Gubbay’s concern that the OPCS figures do not include the cases in which tuberculosis is either not the principal cause of death or is found incidentally, leading to inaccuracies in the notification system for tuberculosis.

This problem was aired by Davies et al.,\(^1\) who obtained unpublished OPCS data, and also data from the MRC Tuberculosis and Chest Diseases Unit (TCDU). They came to the conclusion, having regard to all possible sources or error, that the tuberculosis statistics published by OPCS have an impressively high (to within 10%) degree of accuracy, and that this is in the direction of overestimation. They point out that providing the under-notification of tuberculosis does not exceed by more than 15% the correct total, then the current overestimate provided by the notification statistics is nearer the truth than it appears.

As to his second point, regarding the incidence of tuberculosis in morbid anatomists and mortuary technicians, Professor Grist’s\(^2\) figures need to be examined in some detail. Seven of the 14 cases in whom occupational exposure seemed to be the cause were involved in post-mortem or mortuary work. Three of these cases were contacts of a medical morbid anatomist and some doubt must therefore exist as to whether their infection was contracted in the post-mortem room. In addition, whilst it is accepted practice to give attack rates per 100,000, with such small figures, one must doubt the statistical validity of comparing attack rates in laboratory personnel and those in the general population. Perhaps it might be more useful to determine the incidence per person years of exposure. The figures as presented can give a misleading impression as significant differences will arise by the inclusion or otherwise of even one case. Furthermore, if the attack rates are to be believed, the incidence in porters, assistants, etc is extraordinarily high, though there is no reason to believe that they are particularly exposed to infection.

Ventilation of post-mortem rooms may well be desirable if only to contain the smell, but we should not delude ourselves that ventilation is necessarily going to reduce the risk of infection. Data on this will not be easy to acquire given the low figures of acquired infection in post-mortem rooms (pace Dr Gubbay) but the recently published work by Newsom et al.\(^3\) is a welcome indication that such data are now being sought. In the meantime, I maintain my plea for the observance of safe and careful working procedures rather than spending vast sums of money on installations the validity of which in relation to safety is questionable.

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