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Revised guidelines for HIV infected health care workers

We need data not dogma

Health care workers infected with HIV raise difficult dilemmas. Three such cases in as many days, accompanied by massive press attention and unwarranted intrusion, have spurred the Department of Health to action. It has issued revised interim guidelines to directors of public health and health authorities on managing infected health care workers and guidelines on notifying patients whom they may have exposed to infection during the performance of invasive procedures.[1-3]

The revised guidelines re-emphasise the professional obligation of health workers who believe that they may have been exposed to HIV to seek testing and advice. If they test positive, health care workers or their doctors must inform their employer if they are now, or have been, involved in invasive procedures that could expose patients to blood contamination. Additionally, infected workers must cease such procedures immediately.

The other important new recommendation is that where practicable all patients who have undergone exposure prone invasive procedures (designated in the guidelines) should be notified and offered reassurance, counselling, and HIV testing if they so wish. Providing alternative employment or retraining and preserving confidentiality where possible is meant to promote the cooperation of health care workers. It is still early days, but experience so far suggests that protecting patients from the public gaze of the sensationalist press may be difficult. Unless such protection can be secured infected workers may be reluctant to admit their infection.[4]

We applaud the attention now given to the importance of invasive procedures in which transmission of infected blood could occur. Throughout the recommendations attention is drawn to the very low risk of transmission during these procedures. But how low is that risk, and why, if it is so low, are extensive guidelines and look back procedures necessary? The expert advisory group on AIDS and the Department of Health at last acknowledge uncertainty and, therefore, the need for further data to quantify the risk of HIV transmission and to underpin future policy. This escape from collective denial is welcome.[5]

What are the relevant data? Firstly, some attempt should be made to assess compliance with previous guidance issued in 1988 requesting any doctors with possible behavioural or occupational risk of HIV infection to "seek appropriate diagnostic testing and counselling." Current AIDS surveillance forms record occupation and date of HIV report. If guidelines have been followed then the interval between the report of HIV seropositivity and the diagnosis of AIDS should be longer in health care workers than in other occupations.

Secondly, the follow up of patients who have been exposed to HIV through invasive procedures should include HIV testing. Until the risks of transmission are better quantified we argue that health authorities have a duty of care for patients potentially exposed to HIV through invasive procedures; such patients should actively consider that the only adequate reassurance is a negative HIV antibody test.

Experience with the transmission of hepatitis B during surgical procedures suggests that the risk of infection from hepatitis B e antigen positive staff depends on the procedure, varying from 0 to 20%, with gynaecological and cardiothoracic surgery associated with the highest rate of transmission.[6,7] For procedures with lesser theoretical risks of HIV transmission to patients we need more data before we can provide firm reassurance.

How many patients exposed to HIV during highly exposure prone invasive procedures have been contacted in look back exercises and how many of them have been tested for HIV? If we suppose that there were 6000 such patients worldwide[8] the work of Tokars and colleagues suggests that percutaneous injuries to HIV infected surgeons occurred in about 900 of these invasive procedures and in only one third of these injuries (that is in 300 look back patients) would HIV infected blood have contacted the patient's tissue.[7] Based on the observed seroconversion rate in health care workers of 3/1000 after documented percutaneous exposure to infected blood[4] then 0·9 of 6000 look back patients could be expected to have contracted HIV infection. The claimed figure of zero[2] neither confirms nor refutes these calculations. Unfortunately, the number of patients infected by health care workers worldwide is not zero but five (the patients of the infected Florida dentist[9]).

Finally, more data are needed on the risks of various invasive procedures. Any new study should use trained observers to attend operating theatres at unpredictable and random times; these studies should provide comparisons between self reported and observer reported injuries and blood contamination.

The new guidelines give too little attention to the systematic collection of surveillance data. To encourage compliance with testing we suggest that patients should receive different letters, according to exposure, explaining why testing should be considered. Patients who have undergone highly exposure prone invasive procedures—by analogy with hepatitis B virus transmission—should be recommended to undergo HIV testing. Patients whose risks of exposure are slight should also be offered testing—accumulated data from many such patients would provide a better basis for reassurance. Notification letters should contain a special HIV surveillance test request form and the Association of British Insurers waiver concerning negative HIV tests in these circumstances, which has proved a source of confusion during previous exercises.[5] The proportion of notified patients who underwent testing should be registered and results analysed according to date and type of operative procedure undertaken: the risk of HIV transmission may depend on the stage of the health care worker's infection.

The new guidelines envisage a series of time consuming, costly, and emotionally charged notifications undertaken with the justifiable aim of reassuring patients at a low but currently unquantified risk. Far better that in the course of such laborious exercises, useful data emerge which can provide patients with genuine reassurance and can assist the development of safer forms of surgery—to the benefit of surgeon and patient alike.

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Improving the management of superficial bladder cancer

Fewer routine check cystoscopies?

Two thirds of bladder tumours present as superficial disease, in which the tumour either is confined to the bladder mucosa (stage pTa) or invades only into the submucosa, sparing the bladder muscle (stage pT1). Once the initial tumour has been diagnosed and treated, further surveillance is considered necessary because of the risk of recurrence, which occurs in about three quarters of patients,[1] and invasion of muscle, which occurs in up to a tenth of patients.[2] Hence the "check cystoscopy," which is such a large part of the work of most urology departments.

Traditionally, this has been performed every three months after diagnosis, the interval increasing after a year of freedom from recurrence, but cystoscopies continue at least annually for several years, if not for life. Until recently, in Britain these examinations were performed mainly under general anaesthesia, usually as a day case procedure. Elderly and unfit patients (a substantial proportion) often needed admission.

This seems good preventive medicine, but urologists are now reconsidering their standard practice.[3] Any benefits from regular cystoscopy are achieved at a price, both to the patient and to the NHS. Many patients are disturbed by the whole process, and some experience considerable morbidity after a cystoscopy. Is regular surveillance effective? Most check cystoscopies show no abnormality. In a recent study in which the average follow up consisted of eight cystoscopies over about six years the median number of cystoscopies showing an abnormality was two.[4] A negative result, although reassuring, represents an unnecessary procedure. Perhaps the ultimate treatment failure in superficial bladder cancer occurs when a patient whose tumour never recurs is subjected to nine or ten cystoscopies in the five years after initial treatment.

In preventing the development of tumour invading into muscle regular cystoscopy is unhelpful,[3] not least because 80-90% of such tumours occur in patients without pre-existing superficial disease. Truly superficial, stage pTa, tumours rarely progress, and since endoscopic management consists of treating recurrences after they have occurred there is little evidence that delaying their diagnosis is harmful. The assessment and complete resection of the presenting tumour remains critical and must be done by someone with urological experience. Extensive or multifocal tumour may create special problems. Unsuspected muscle invasion (pT2) and poorly differentiated pT1 tumours must be identified. How then should the remaining patients be followed up?

Ideally, it is better to prevent rather than treat recurrent disease. In a Medical Research Council trial intravesical instillation of mitomycin after diagnosis and treatment of the presenting tumour reduced the risk of subsequent recurrence, especially if it was repeated at the first four three monthly check cystoscopies.[5] Routine prophylactic chemotherapy has not, however, become common practice in Britain. Increased use of flexible cystoscopy under local anaesthesia will reduce the cost and inconvenience of each examination.[6]

Of most importance is a re-evaluation of check cystoscopy programmes. Are patients undergoing cystoscopy too frequently? Do all patients require the same follow up regimen? Although the most potent harbinger of deep invasion is a pT1 tumour,[7] various features of the presenting tumour have prognostic importance for recurrence.[8] In a review of data from the Medical Research Council's trials the two most important indicators were the presence of single or multiple tumours at diagnosis and the presence of tumour at the first three month follow up cystoscopy.[9]

On this basis, patients were divided into three prognostic groups, with a different follow up regimen recommended for each. In particular, in those with a single tumour at presentation and no abnormality on three month cystoscopy annual follow up cystoscopy (perhaps with a flexible cystoscope) was considered to be sufficient. A selective approach would allow resources to be concentrated on those most at risk. These in turn are the patients for whom measures such as intravesical chemotherapy should be considered. In time, establishing a formula that will calculate the optimum follow up interval for each patient may be possible.[4]