Letter to the Editor

Antibody-guided lymphangiography in the staging of cervical cancer

Sir—We read with interest the report on antibody guided lymphangiography in the staging of cervical cancer (Epenetos, 1985).

The author reports the occurrence of non specific isotope uptake by pelvic lymph nodes in patients presented to be free of nodal metastasis (as judged by concomitant X-ray lymphangiography). Non specific antibody binding through the Fc portion of the immunoglobulin was postulated as the cause of this phenomenon.

We would suggest, however, that the effect may be partly explained by the presence of X-ray contrast medium in the lymphatics. We have performed similar antibody studies using a polyclonal anti CEA antibody linked to iodine¹³¹. Figure 1 illustrates the gamma camera image of the

anterior pelvis 24 h following injection of labelled antibody in a patient with Stage Ib carcinoma of the cervix. There is a difference between the two sides of the pelvis on this scan with small discrete areas of uptake on the right but broader more diffuse areas of uptake on the left. Subsequent pelvic lymphadenectomy revealed no evidence of lymph node metastases. Standard bipedal X-ray lymphangiography had been performed in this case but technical problems had prevented an adequate infusion of Lipiodol into the lymphatics of the right leg and this fact may explain the asymmetry seen on the antibody guided scan. This is compatible with the known occurrence of lymph node enlargement and lymphatic stasis following lymphangiography with lipid soluble contrast medium (Spitalier *et al.*, 1967; Wallace *et al.*, 1979).

Figure 1 Antibody guided lymphangiography. Anterior pelvic scan at 24h. There is an asymmetrical appearance of the right and left nodal groups.

We would suggest that this effect of stasis and nodal enlargement should be borne in mind when interpreting antibody guided scans.

Yours etc.,

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Dr Epenetos replies:

Sir—Thank you for bringing to our attention the letter of Saunders *et al.* in which it is stated that non-specific antibody binding in the pelvic lymph nodes may be partly explained by the presence of X-ray contrast medium in the lymphatics. Certainly their studies of using a polyclonal anti CEA antibody linked to iodine-131 concurrently with bipedal X-ray lymphangiography demonstrate that lipid-soluble contrast medium can interfere with antibody localisation as shown by their illustrated example. We agree therefore with them that X-ray contrast medium can be a further factor in non-specific antibody capture by lymphatics. Since our last report on antibody guided lymphangiography (Epenetos, 1985) we have performed further lymphangiography but on this occasion administering radiolabelled antibody subcutaneously without injection of contrast. We have seen again non-specific antibody capture by lymphatics but our data so far would indicate that this capture is less than when the antibody was injected during lymphangiography, pointing again to the fact that X-ray contrast medium interferes with radio-immunolocalisation.

References

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- WALLACE, S., JING, B., ZORNOZA, J. *et al.* (1979). Is lymphangiography worthwhile? *Int. J. Radiat. Oncol. Biol. Phys.*, **5**, 1873.

We also noted that the use of indium-labelled monoclonal antibodies given subcutaneously causes more marked imaging of local lymphatics as compared to iodinated antibody. This is probably due to the different kinetics of the various radiolabels after antibody breakdown. We still believe that the best way to sort out specific and non-specific binding is to perform immuno-lymphangiography using a specific antibody followed by a non-specific antibody.

Yours etc.,

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Reference

- EPENETOS, A.A. (1985). Antibody guided lymphangiography in the staging of cervical cancer. *Br. J. Cancer*, **51**, 805.