



Pulsatile bleeding during closed vertebral biopsy

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Needle biopsy of the spine yields a higher diagnostic accuracy when large bore instruments are used. The Harlow Wood vertebral biopsy needle, for instance, has an internal diameter of 3 mm. However, pulsatile bleeding may occur, especially when a tumoral lesion is biopsied. The authors noted 9 pulsatile bleedings in 238 needle biopsies (3.8%). A piece of Surgicel, brought in with the trephine guide and the obturator, was an efficient treatment. A second piece of Surgicel, soaked in 1:10.000 adrenaline, was sometimes necessary.

Keywords : needle biopsy ; vertebra ; bleeding.

INTRODUCTION

Fyfe *et al* (1) demonstrated that large biopsies, taken with needles of two millimetres or more internal diameter (such as their Harlow Wood needle, with 3 mm internal diameter) gave a 90.4% diagnostic yield, whereas small biopsies taken with thinner needles gave only a 50% yield. They ascribed this phenomenon to the fact that small needles produced a cytological smear, rather than a histological block of tissue.

MATERIALS AND METHODS

The medical records of 238 patients (138 men and 100 women), aged 21 to 83 years, were reviewed. All of them had undergone a closed vertebral biopsy with a Harlow Wood large bore needle. The biopsy was performed via a posterolateral approach in the operating

room with the patient in the prone position, using an image intensifier. Of the 238 patients, 124 were found to have a spinal infection and 68 a neoplastic lesion (malignant in 59 and benign in 9), totalising 81%. A definite diagnosis was not obtained in the other 46 patients (19%). Pulsatile bleeding through the trephine guide was noted in 9 patients (3.8%) (table I). The following procedure was followed. First of all the position of the trephine guide was checked fluoroscopically, in order to exclude any malposition. If the pulsative bleeding continued, a piece of Surgicel, 3 cm × 0.5 cm was introduced through the trephine guide by means of the obturator (figs 1 & 2). Usually one piece of Surgicel was sufficient to control the bleeding. In one case the bleeding was not controlled and a second piece of Surgicel, soaked in 1:10.000 adrenaline, was introduced. Irritation of a nerve root occurred in one of the 9 patients, but the symptoms recovered completely within 3 months. This was presumably due to the fact that Surgicel expands about 30%.

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Fig. 1. — Surgicel[®] in the trephine guide, ready to be pushed into the bleeding area with the obturator.

Table I. — Underlying diagnosis in patients with pulsatile bleeding (n = 9)

Renal adenocarcinoma	2
Thyroid carcinoma	1
Paget's disease	2
Sclerotic haemangioma	1
Undifferentiated adenocarcinoma	2
Breast carcinoma	1

DISCUSSION

Yaffe *et al* (2) also reported bleeding in two out of 19 patients (10.5%), using a large bore needle. Insertion of Gelfoam was sufficient. The spine surgeon should be aware of this complication. In the current series bleeding always occurred in highly vascular lesions. Based on our experience with this small series, we believe that the use of haemostatic sponge adequately controls bleeding, even in biopsy of highly vascular tumours.



Fig. 2. — Surgicel[®] guided into the vertebra

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