

Cerebrospinal fluid leak after bone marrow biopsy.

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A 29-year-old female underwent a bone marrow aspirate and trephine biopsy as part of staging investigations for a new diagnosis of an ALK-positive anaplastic large cell lymphoma. The biopsy was taken from the right posterior iliac crest and no complications were reported at the time the biopsy was taken. Following the procedure the patient complained of clear discharge from the biopsy site. Two days later she complained of severe headache, which was aggravated by sitting or standing. A computed tomography (CT) scan of the head performed at this time was normal. The headache was not relieved with simple analgesia and became more severe to the extent that the patient was unable to sit up comfortably. The headache persisted and the discharge from the biopsy site continued. A sample of the fluid was collected and sent for asialotransferrin assay. The fluid was positive for asialotransferrin (tau-transferrin and beta-2 transferrin) which indicated that the fluid almost certainly contained cerebrospinal fluid (CSF) raising the possibility of a CSF leak from the biopsy site.

A magnetic resonance imaging (MRI) scan of brain and whole spine was performed, which demonstrated bilateral subdural effusions suggestive of extremely low CSF pressure (axial T2 weighted image, top left). Sagittal oblique images demonstrate a traumatic L5/S1 pars intra-articularis defect (long arrow) and fluid at the floor of the right L5/S1 intervertebral foramen (short arrow) (top right). High signal intensity in the soft tissues and paraspinal muscles on additional fat saturated images indicates the needle trajectory (long arrow). A bone fragment within the right side of the sacrum is surrounded by fluid (short arrows), related to a CSF leak, which is likely to be the result of a dural tear in the adjacent right S1 nerve root sleeve (bottom). Neurosurgical colleagues suggested that a blood patch should be performed in the first instance although it was acknowledged that the neurosurgical team had not previously encountered this complication. Anaesthetic colleagues then performed a blood patch at the L5/S1 level, following which the patient reported improvement in symptoms and cessation of the discharge from the biopsy site. The patient made a full recovery and proceeded to complete her chemotherapy regimen, including intrathecal prophylaxis.

Here, we report an unusual case of CSF leak post bone marrow biopsy and satisfactory resolution of the leak using a blood patch technique.

