Neurosurgical forum

Osteomyelitis in the Elderly

To the Editor: I read with much interest the paper by Cahill, et al. (Cahill DW, Love IC, Rechtine GR: Pyogenic osteomyelitis of the spine in the elderly. J Neurosurg 74:878–886. June, 1991). Osteomyelitis can in some rare cases be complicated by the spread of inflammation with formation of epidural abscesses or inflammatory complications in the paravertebral region. I take the liberty of mentioning in this context our experience with the utilization of a specific monoclonal antibody, CEA-NCA 250/183 labeled with $^{99}$Tc, for diagnosis in such a case. This antibody reacted with 90% of the granulocytes in peripheral blood.

This 70-year-old woman was initially diagnosed as having lumbago with pain radiating into the lower extremities. The clinical picture was complicated by subfebrile episodes, pain in the left hypogastrum and mesogastrum, and an increased erythrocyte sedimentation rate. Computerized tomography (CT) of the lumbar spine demonstrated two small osteolytic defects in the L-5 vertebral body, which led to a diagnosis of osteomyelitis. Ultrasound investigation of the abdominal cavity was negative.

Difficulty with the diagnosis encouraged us to perform the above-mentioned scintigraphic investigation. Monoclonal CEA-NCA antibodies were administered to the patient in a dose of 400 MBq. Scintigraphy demonstrated an extensive inflammatory infiltrate in the region of the left psoas muscle (Fig. 1 left), and a CT scan of this area confirmed the finding (Fig. 1 right). The patient underwent surgery via the dorsal approach with hemilaminectomy of the L-5 vertebra. Pus was obtained from the vertebral body which, on culture, grew Peptostreptococcus. Intensive treatment with antibiotics under CT monitoring led to resolution of the inflammatory disease. The infiltrate in the left psoas muscle region healed without surgical intervention.

In some cases, vertebral osteomyelitis in the lumbar spinal region can be healed with conservative therapy including long-term treatment with antibiotics and bed rest. In our case, we decided to operate in order to confirm the correctness of the diagnosis and to obtain the bacterial agent for investigation. In the differential diagnosis we took into consideration the possibility of tuberculosis, especially because our patient was treated for pulmonary tuberculosis in her youth. Application of the above-mentioned monoclonal antibodies led to the discovery of inflammation spreading to a considerable distance from the primary osteomyelitic deposit. This made it possible to carry out the CT investigation directed to this area, which we then repeated to monitor resorption of the inflammatory infiltrate. In the course of treatment, our patient underwent intensive clinical observation to check the need for further surgical intervention, but this was not necessary. The patient is now in very good health and the disease may be considered healed.

Our experience demonstrates a considerable contribution of antigranulocyte monoclonal antibodies in the investigation of suppurative spinal disorders. Very favorable results can be obtained when this scintigraphic method is combined with CT. The scintigram provides perfect demarcation of the region that is to be investigated by CT.

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Response: We wish to thank Dr. Kala and his colleagues for their interest in our paper and congratulate them on their results in the case they reported. In our experience, the value of isotope-labeled leukocytes is

![Fig. 1. Left: Scintigram showing pathologically increased activity in the region of the left psoas muscle. Right: Computerized tomography scan in the same region after intravenous application of contrast medium demonstrating the inflammatory infiltrates.](image)
similar to that of the gallium scan. The use of these studies coupled with the bone scan is extremely sensitive (approaching 100%). The specificity is also very high, probably over 90%, although the resolution capacity is obviously quite low.

We would again agree that the majority of cases of spinal osteomyelitis can be treated conservatively and without surgery as long as they are caught early before significant compressive or destructive changes have occurred. Nonetheless, in the month preceding receipt of this letter, we have encountered three additional cases of severe destructive osteomyelitis of the lumbar spine in elderly patients. In each of these, the diagnosis was missed and the patient underwent decompressive laminectomy for presumed lumbar stenosis.

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**Masson's Venetant Intravascular Hemangioendothelioma**

**To The Editor:** This is in reference to the recent article by Wen et al. (Wen DY, Harden DR, Wirtschafter JD, et al: Elevated intracranial pressure from cerebral venous obstruction by Masson's venetant intravascular hemangioendothelioma. Case report. *J Neurosurg* 75:787-790, November, 1991). In 1987, we reported a similar case (Figs. 1 and 2), with discussion of the pathophysiology of the lesion. The intracranial pressure and sagittal sinus pressure were measured and implicated the cyst as the cause of the intracranial hypertension. So, despite the operative risk, direct surgical procedure appeared to be the correct approach and was met with a favorable response.

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**Third Ventriculostomy**

**To The Editor:** The paper by Dr. Kelly (Kelly PJ: Stereotactic third ventriculostomy in patients with non-tumoral adolescent/adult onset aqueductal stenosis and symptomatic hydrocephalus. *J Neurosurg* 75:865-873, December, 1991) is an excellent article and makes a number of interesting points. To me, the most interesting point is that he feels that the existing shunt should be occluded. This for me is new information, probably because I have usually performed this procedure in infants. I disagree, however, with his statement regarding case selection on page 871: “From a review of the literature it is clear that infants are not suitable candidates for third ventriculostomy.” I published an article in 1981 on that subject. Infants differ from adults in that the unmyelinated brain becomes swollen or water-logged in response to untreated hydrocephalus and the

![Fig. 1. Axial computerized tomography scan at the level of the torcular after intravenous infusion of contrast medium. The lumen of the venous structure is shifted forward by the development of the tumor.](image1)

![Fig. 2. Digitalized subtracted left carotid angiogram-phlebogram, anteroposterior view. Note the poor opacification of the torcular due to compression of this structure by the tumor.](image2)

**Reference**


**RESPONSE:** We thank Professor Djindjian and his colleagues for bringing their case to our attention. Fortunately, their patient’s lesion was entirely extrinsic to the torcular, allowing for complete resolution of the problem with surgery. In contrast, our patient’s lesion was entirely intrinsic to the torcular and sagittal sinus, hence the added precaution of the optic sheathotomy.

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