NEURO-IMAGE

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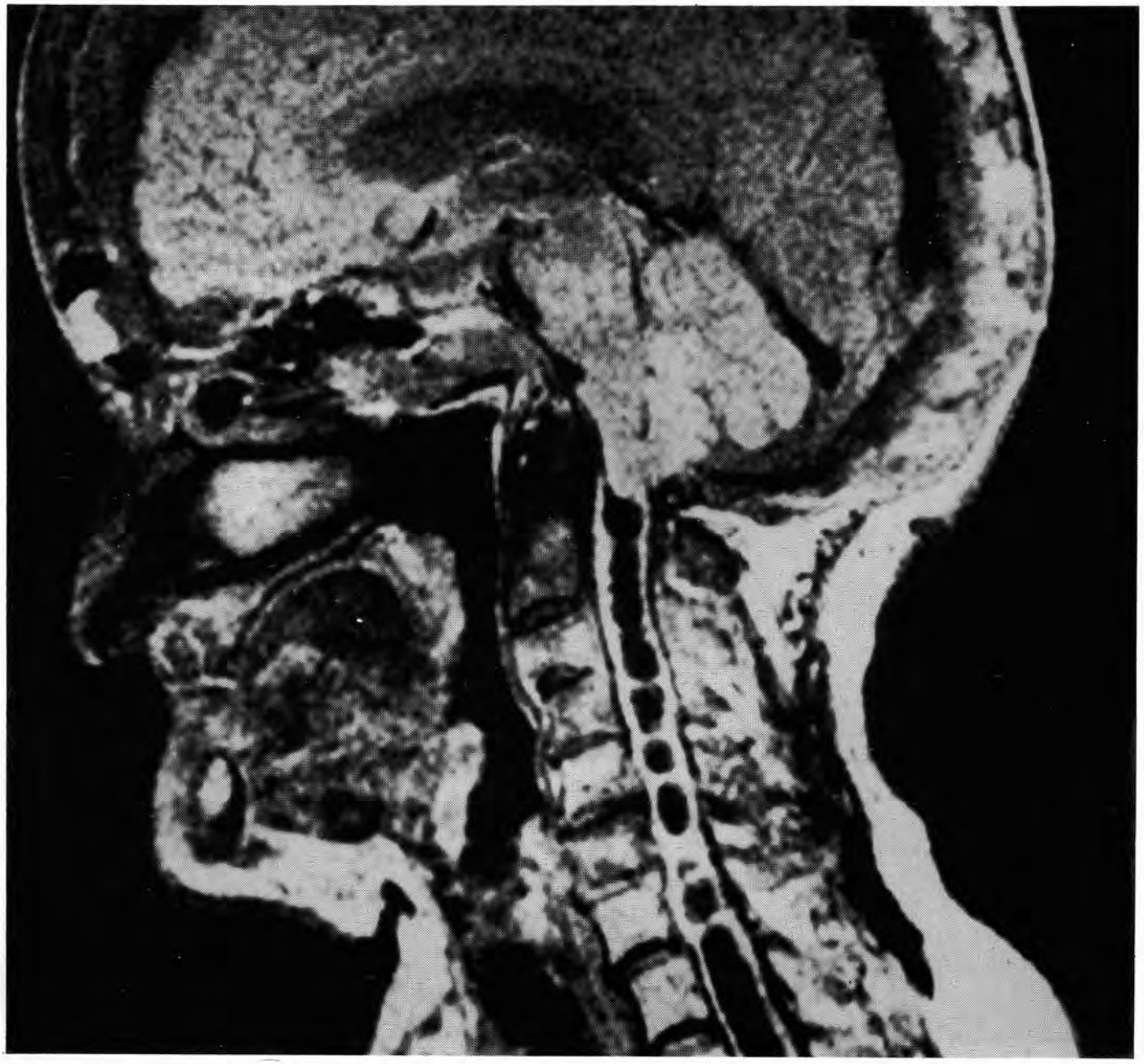
Unusual Complication of Paget's Disease



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Unusual Complication of Paget's Disease

S. Fontaine, M.D.

A 64 year-old woman known to have Paget's disease for 10 years presented with progressive neurological disturbance including drop attacks, numbness of the left side of the face, right spastic hemiparesis, right foot dragging and ataxic gait.

Plain radiographs showed basilar invagination and other classical changes of Paget's disease of the skull. CT scan also demonstrated the basilar invagination with relative compression of the posterior fossa structures. There was no hydrocephalus.

Midline sagittal MR image (From page) confirmed the involvement of the skull with thickening of the diploic space which is seen as a high-intensity-signal zone. This results from the slow flowing, almost stagnant blood of the diploic channels and from the high hydrogen content of the abundant connective tissue in Paget's disease. The upward protrusion of the foramen magnum and surrounding bone with secondary impression on the medulla and tonsils was well demonstrated. There is a syrinx extending from that level down to T12 (fig. 2).

Basilar invagination, with or without neurologic symptoms occurs in about one-third of patients with Paget's disease of the skull. MR offers a new dimension in studying these patients, demonstrating both the bony and soft-tissue changes and showing their relationship. Its advantage over CT is the ease of obtaining sagittal views. In the present case, made easy the diagnosis of a syrinx which is a very rare complication of Paget's disease with basilar invagination.

Reference

Tyai-a-Thane RTO, Blauer JL, Falke THM et al., Magnetic resonance imaging in Paget's disease of the skull, AJNR **1985**; 6:879-881.

The Difficult Diagnosis of Spinal Osteomyelitis

Vithal Wagle, M.D.

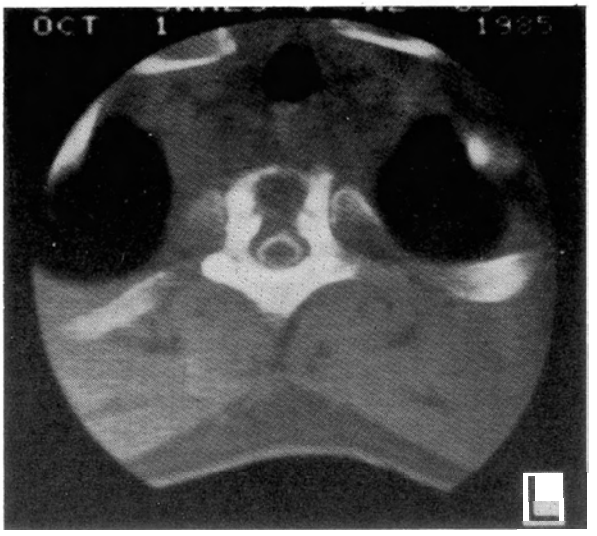


Fig.1

A 23 year-old-man, presented in June 1985 with dull continuous interscapular pain, of three months' duration which even kept him awake at night. Simultaneously, he also noted weakness of his left upper extremity, particularly of the distal muscles of his left hand. There was accompanying weight loss. Neurological examination revealed mild weakness of the opponens pollicis of the left hand with wasting of the hypothenar eminence and the intrinsic muscles. Babinski sign was positive bilaterally.

Plain films of the dorsal spine showed a para and prevertebral mass with destruction of T2. Tomograms showed a destructive lesion of T2 with fusion of the opposing surface of T1 and T2. Myelography showed partial extradural compression mainly at T2 on the right and at T1 bilaterally. Postmyelogram CT scan showed evidence of extradural compression of the spinal cord at T2. The diagnosis of lymphoma was entertained.

Repeat myelography and CT scan done in September 1985 showed a predominant destruction of the body of T2 and, to lesser extent, destructive involvement of T1, T3 and T4. Mild anterior extradural compression of the cord was noted too. (fig. 1)

MRI (Magnetic resonance imaging) of the thoracic spine showed a high intensity signal on the first echo at the prevertebral region anterior to the upper thoracic spine mainly T2. (Fig. 2)

MRI of the cervical spine showed a similar high intensity signal, again in the prevertebral region from T2 to almost C2, pushing the pharynx and other structures in the region anteriorly. (Fig. 3)

Pus was aspirated through a needle biopsy and the diagnosis of tuberculosis made.

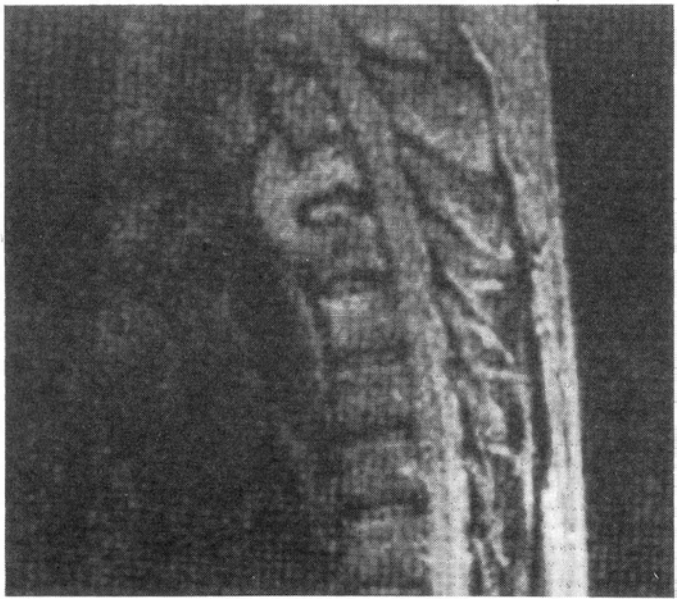


Fig. 2

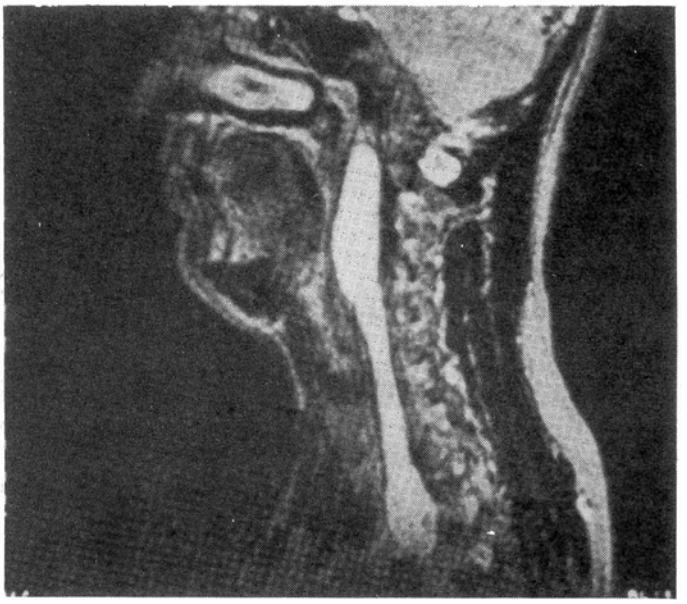


Fig. 3

The Interhemispheric Bridge
Corpus Callosum

The MRI Point of View

HYPOPLASIE POSTÉRIEURE
(Colpocéphalie)

AGÉNÉSIE

ATROPHIE

CALLOSOTOMIE
(section complète)

Pyogenic Spondylitis Without disc Space Collapse

S. Fontaine, M.D.

A 68 year-old man presented with 5 months' history of severe low-back pain, recurrent fever and weight loss. He was known to have DISH (diffuse idiopathic skeletal hyperostosis) dating back to 1970. The physical exam was unremarkable. Pertinent laboratory studies included leucocytosis and urine culture positive for E. Coli.

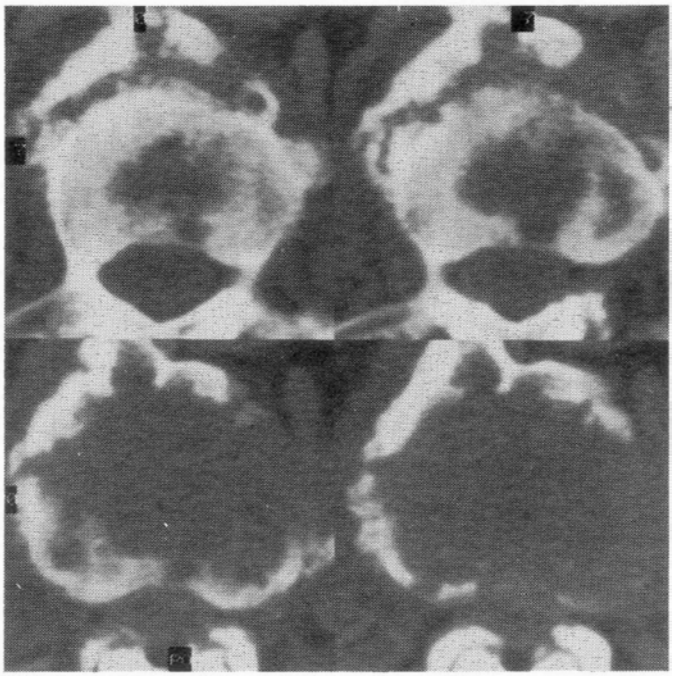
Lumbosacral spine radiographs showed loss of definition of the vertebral end plates at the L1-L2 disc level with destructive lesions of the adjacent vertebral bodies. Also noted was a large anterior L1-L2 bridging osteophyte with disc space preservation (fig. 1).

A technecium 99-m MDP and a gallium -67 radionuclide studies showed uptake at the L1-L2 level and in this case was the first examination to suggest an infectious etiology. CT confirmed the destructive lesions of the L1 and L2 vertebral bodies (fig. 2).

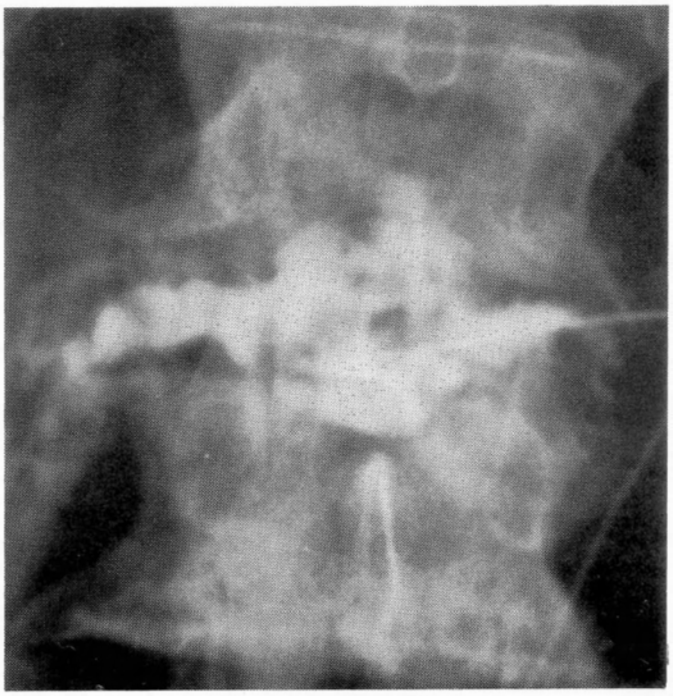
A discogram performed via a left lateral approach demonstrated disruption of the disc and fistulous communication to the right paravertebral soft tissues (fig. 3).

E. Coli was cultured from needle aspiration of the disc space and the patient responded favorably to appropriate aggressive IV antibiotic therapy.

Plain film radiography has a low sensitivity in the early detection of infectious disease of the spine when there are superimposed degenerative



changes. Furthormore, the hallmark of pyogenic discitis is disc space collapse and the disc space was preserved in this patient due to superimposed DISH. Aggressive coordinated radiologic examination with multiple available modalities should be undertaken to hasten etiologic diagnosis and reduce morbidity in such patients.



IRM dans les angiomes veineux

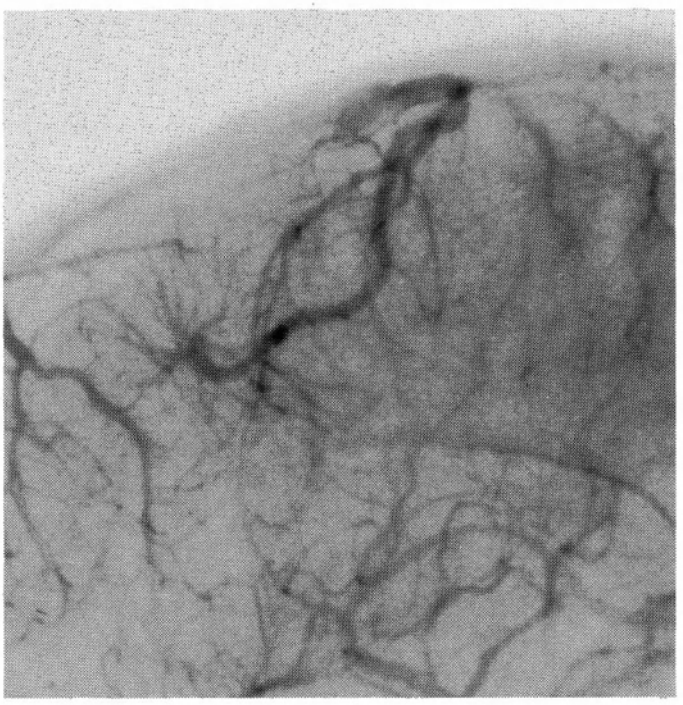
V. de la Sayette, M.D.
S. Fontaine, M.D.

Malformations vasculaires relativement rares, le diagnostic positif des angiomes veineux nécessite des critères angiographiques spécifiques: absence d'anomalie vasculaire à la phase artérielle et capillaire, mise en évidence de veines médullaires dilatées, et d'une volumineuse veine de drainage, à la phase veineuse tardive.

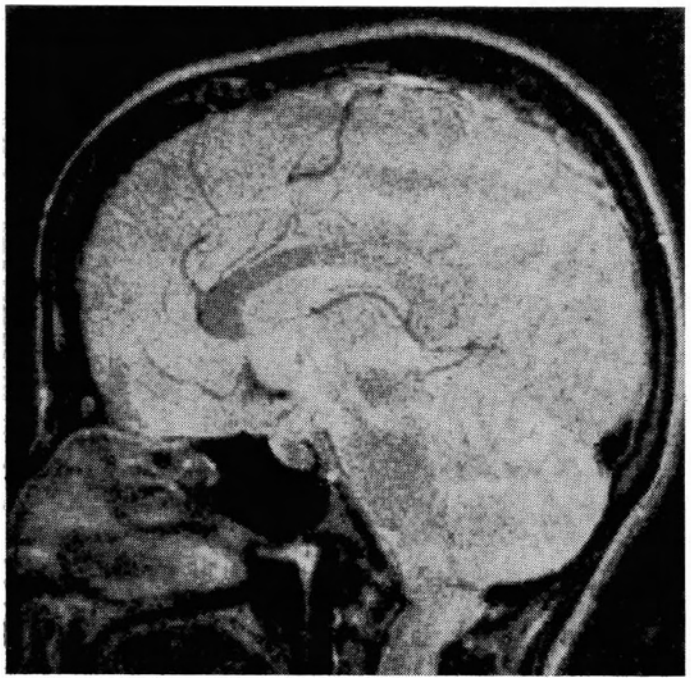
Le CT scanner avec infusion de produit de contraste montrant un nodule hyperdense non-spécifique et/ou une hyperdensité linéaire correspondant à la veine de drainage permet d'évoquer le diagnostic sans cependant pouvoir l'affirmer.

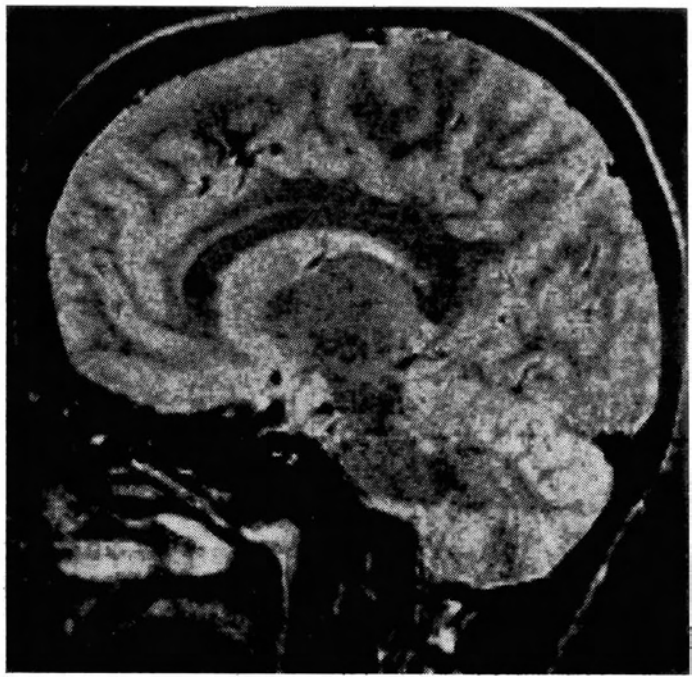
Six cas récents ont été étudiés en IRM: des vaisseaux anormaux ont été mis en évidence dans tous les cas et dans 4 cas les veines médullaires étaient clairement visibles. En faisant varier le temps d'écho (50 ms/100 ms) la nature veineuse des vaisseaux anormaux peut être suspectée en raison de la modification du signal.

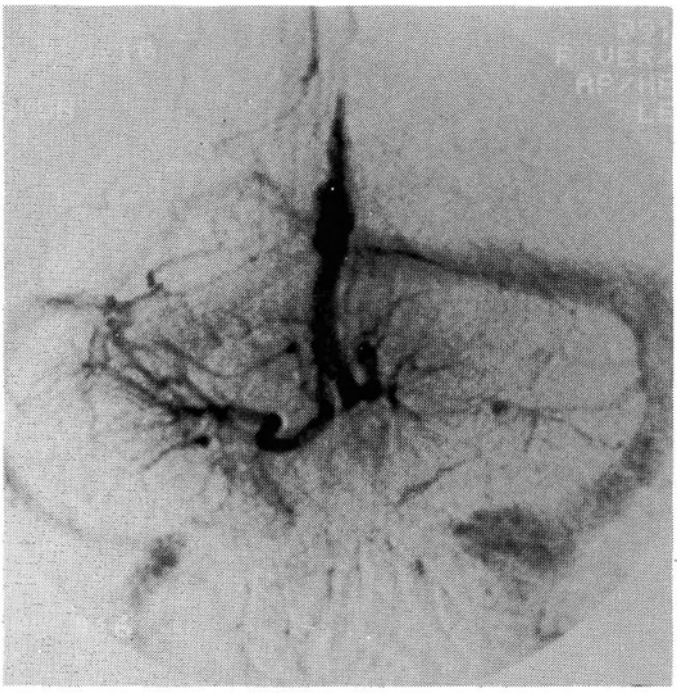
Les renseignements fournis dans l'un des six cas (veines médullaires visibles à l'écho 1, disparaissant en écho 2, et volumineuse veine de drainage) nous ont paru suffisant pour surseoir à l'angiographie. →



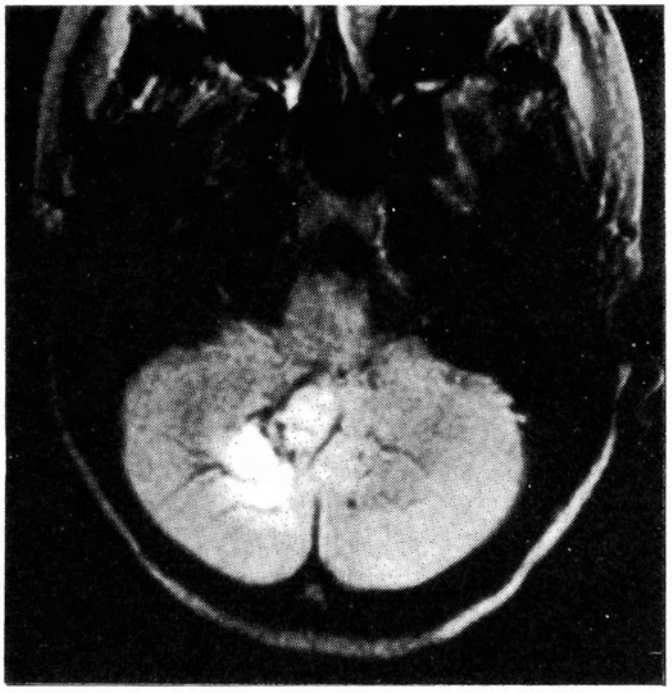
Angiome frontal droit: à l'angiographie, veines médullaires et veines de drainage. Images identiques à l'IRM (photos 1, 2, 3).



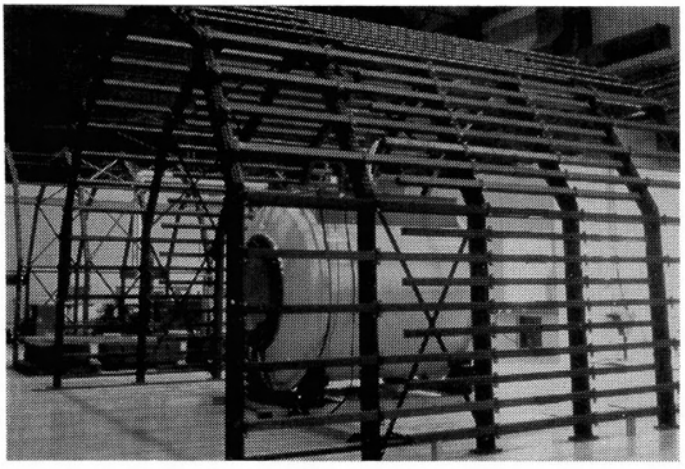




Veines médullaires cérébelleuses bilatérales se drainant dans une volumineuse veine de drainage.



IRM: démonstration des mêmes anomalies vasculaires bilatérales; hémorragie vermienne et cérébelleuse droite.



Renovation

Our MR unit, the Philips Gyroscan, after 13 months of operation at 0.5T, and a total of 1324 examinations, is presently undergoing upgrading to 1.5T.

It is hoped, that, by mid-June, it will resume operation in clinical work and start its research work in spectroscopy.

Fonds de recherche McRae — Institut Neurologique de Montréal

Les collègues et amis qui ont connu Donald L. McRae peuvent, en faisant un don, témoigner de leur reconnaissance pour son influence et son enseignement dans le domaine de la Neuroradiologie.

Les sommes recueillies serviront à la promotion de l'enseignement en Neuroradiologie, au développement de nouvelles techniques et à l'organisation des conférences McRae consacrées à l'imagerie Neurologique.

Envoyez votre don à l'adresse suivante:

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