

# NEURO IMAGE

## EDITORIAL

*The first Tuesday of each month during the academic year is now firmly fixed as Neuro Study Club night.*

*In its sixth year of existence, the meetings are open to all interested in neuro-radiology irrespective of university or language affiliation. Montreal area hospitals represented is usually five but on occasion this has risen to ten.*

*The format is informal - "Show and Tell" or more commonly "Show, Guess and Tell".*

*While adult neuroradiologists have had obscure syndromes foisted on them those with a pediatric interest can be subjected to the protean C.T. appearances of meningioma. The meetings do however provide a unique forum for discussion and mutual edification in the rapidly changing field of neuroradiology.*

*It is hoped that this newsletter will further disseminate the proceedings of the Study Club and serve as a permanent record of the case material presented.*

Gus O'Gorman

## HYDROMYELIA DEMONSTRATED BY METRIZAMIDE MYELOGRAPHY IN TWO CHILDREN WITH MYELOMENINGOCELE REPAIRED IN THE NEWBORN PERIOD.

by A.M. O'Gorman

Hydromyelia frequently accompanies major malformations of the spinal cord. It may extend upwards into the lower cervical segments but tapers rapidly towards the cranial end of the cord. (1)



Figure 1

The initial hydromyelia was outlined serendipitously.

Simultaneous injection into the lateral subarachnoid space was performed in two cases and the extent of the Chiari malformations was evaluated.

Figures 1 - 2



Figure 2

Hydromyelia is likely outlined by an injection into a repaired myelocystocele.

### Reference:

- (1) Mackenzie, N.G., Emery J.L. Deformities of the cervical cord in children with neurospinal dysraphism. *Developmental Medicine and Child Neurology*. Suppl. 25, 58-67, 1971.

## HUGE POSTERIOR FOSSA CYST EXTENDING SUPERIORLY TO DILATED CAVUM VELUM INTERPOSITUM.

by A.M. O'Gorman

Metrizamide myelogram and cisternography demonstrated cerebellar tonsils in the upper cervical canal and the previously unrecognized fourth ventricle was visualized within the posterior fossa.

Reference: Radiology of arachnoid pouches  
Danziger J., Bloch S.  
Clin. Radiol.: 26, 275-283, 1975

## EROSION OF THE SUPERIOR ORBITAL FISSURE.

by Marvin Goldenberg

Presentation of 4 cases:

- 1- Huge aneurysm of the carotid at the cavernous sinus.
- 2- Large aneurysm of the carotid from the cavernous portion but extending in the orbital fissure.
- 3- Large middle fossa meningioma with enlargement of superior orbital fissure, foramen rotundum and foramen ovale.
- 4- Cavernous hemangioma in posterior aspect of the orbit.

From this presentation and the following discussion it is suggested that erosion of the superior orbital fissure is usually caused by giant aneurysms of the cavernous carotid. Other causes such as the ones presented above are rare. Local neurofibroma is also mentioned but remains relatively rare as well.

## APPARENT ENLARGEMENT OF AN INTERNAL AUDITORY CANAL.

by Marvin Goldenberg

Frontal tomography of the petrous pyramid was needed to demonstrate the normal canal and what appears to be a large air cell in the petrous tip. The air cell is not well aerated and chronic disease is suggested.

The investigation should be completed with tomography in the submento-vertical projection.

ERRATUM: In the first issue, an error was made in the description of dural osseous metaplasia. The beginning of the second paragraph, should read "involves the visceral layer of the dura mater" instead of "the parietal layer".

Three (3) presentations by Jean Vézina.

LARGE FRONTAL ARACHNOID CYST WITH THINNING OF THE ADJACENT FRONTAL BONE.

BASILAR ARTERY ANEURYSM PRESENTING AS A HYPERDENSE NODULAR LESION IN THE III VENTRICLE.

The aneurysm mimicks a colloid cyst.

Diagnosis possible from appearance of basilar artery itself and location of lesion behind foramen of Munro.

MULTIPLE HYPODENSE CEREBRAL LESIONS.

Diagnosis of seedings from primary dermoid; tumour in vicinity of frontal horn. This possibility is suggested by Roberto Wee.

The alternate possibility is that of Encephalocraniocutaneous lipomatosis.(2)

(2) Reference: Haberland, C., Pérou M.  
Arch. Neurol. 22: 144-155, 1970

INVESTIGATION OF SUBARACHNOID HEMORRHAGE.

by Denis Melançon

As a follow-up to same in Vol.1, No.1, Page 1, the experience at the M.N.H. for year 1979 is submitted.

Number of cases investigated	49	Out of the 34 positive angiograms
Number of negative angiograms	15-30%	13 anterior communicating
Number of repeat angiograms	5	7 middle cerebral
Number of aneurysms found	2-40%	7 post-communicating
		7 multiple

ABSTRACTS FROM CURRENT LITERATURE.

COMPUTER TOMOGRAPHY IN THE EVALUATION OF SUBARACHNOID HEMORRHAGE.

B. Liliequist and M. Lindqvist  
Acta Radiologica  
Vol. 21 (1980) Fasc. 3

"Repeat C.T. scanning and cerebral angiography has been performed in 68 consecutive patients with subarachnoid hemorrhage. Blood in the subarachnoid cisterns could be discerned in 27 of 32 patients provided the examination was performed within 2 days of the bleeding. The distribution of cisternal blood can be identified which, in combination with the localization of a possible intracerebral hematoma, yield a rather good predictability as to the site of the ruptured aneurysm. The subsequent angiography can thus be directed to the relevant vessel in most cases. Repeat C.T. scanning can replace angiography in the evaluation of patients with deterioration of the clinical condition."

COMPUTER TOMOGRAPHY IN SUPERIOR SAGITTAL SINUS THROMBOSIS.

Jan Brismar  
Acta Radiologica  
Vol. 21 (1980) Fasc. 3

"Three angiographically confirmed cases and one possible case of aseptic superior sagittal sinus thrombosis had C.T. findings ranging from apparently normal to single or even bilateral multiple intracerebral hemorrhages surrounded by low-attenuation regions. The latter finding, in particular, suggests a possible superior sagittal sinus thrombosis."

## LARGE SELLA TURCICA WITH EROSION.

by Roberto Wee

Skull X-ray of a 31 year female who presented with headache and visual field defects showed an enlarged sella with erosion of the anterior wall. (Fig. 3)

The question of whether the changes were due to local pressure erosion (secondary to a pituitary tumour) or to generalized raised intracranial pressure was discussed.

Consensus of opinion was in favor of local erosion and Denis Melançon raised the possibility of erosion by an enlarged III ventricle.

Findings on C.T. scan were consistent with obstructive hydrocephalus. The offending lesion was localized to the outlet of the III ventricle. (Fig. 4)

Ventriculogram with air and Ethiodan demonstrated stenosis of the aqueduct of uncertain etiology but probably benign.

The recesses of the III ventricle were dilated and displaced inferiorly to the level of the diaphragm sellae. (Fig. 5)



Figure 3

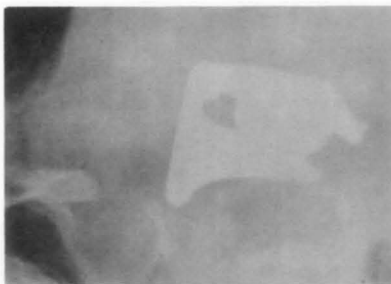


Figure 4



Figure 5

## A SCHMORL'S NODE IN THE CERVICAL SPINE.

by Denis Melançon

Presentation of a disc space lesion at C<sup>5</sup>-C<sup>6</sup> in a female patient with no relevant clinical signs. (Fig. 6)

Examinations were performed in 1978 and 1980 with no change in the interval.

The disc space is narrowed and there is deformity of the superior plateau of C<sup>6</sup>. (Fig. 7)

Tomography discloses well a persistent cortical outline.

Schmorl himself and Köehler do not report a cervical manifestation of this phenomenon.

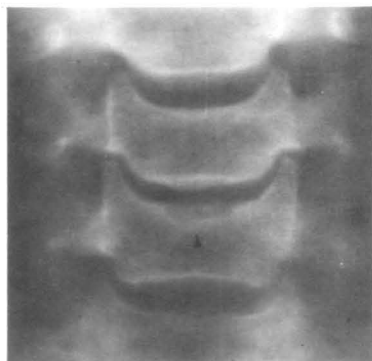


Figure 6



Figure 7

"In the case of Schmorl's cartilaginous nodes (50) material of the disk ruptures into the vertebral bodies, that is, there occurs a prolapse of disk material through the hyaline cartilaginous plate into the substance of the spongiosa of one or both contiguous vertebral bodies. The intervertebral disk decreases in height, and the disk substance protruding into the spongiosa becomes sealed off by reactive bone apposition." (3)

Reference: (3) Borderlands of the normal and early pathologic in skeletal roentgenology.  
Alban Kohler, E.A. Zimmer - translated by J.T. Case