

# NEURORADIOLOGY

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## **The 25th birthday of the American Society of Neuroradiology**

### **Le 25ième anniversaire de la Société Américaine de Neuroradiologie**

### **Il venticinquesimo compleanno della Società Americana di Neuroradiologia**

**D. TAMPIERI**

The American Society of Neuroradiology (ASNR) has celebrated its silver anniversary in New York City. The meeting, from the 10<sup>th</sup> to the 15<sup>th</sup> of May, was organized by the President in charge, Dr Derek C. Harwood-Nash.

The scientific sessions, enriched by more than 150 papers, were always opened by major lectures given by guest speakers. The main role was played by Magnetic Resonance. Among multiple topics designed to display the «state of the art» of MR, flow phenomena, memory and degenerative brain disorders, movement disorders, paramagnetic contrast agents, cerebral ischemia and infarction, the sella turcica and the spine and spinal cord, represented the most interesting subjects.

In particular, Magnetic Resonance angiography gives an idea of what the future holds. Comparison with traditional x-ray angiography is not yet possible, mostly due to multiple technical problems, yet only a few images of MR angiography are enough to produce in the mind the idea that the technique of catheterisation may be coming to an end.

Memory, degenerative brain disorders and movement disorders represent a large field of research and clinical work. First of all memory, this guest of our deeper brain, which has always been

a fascinating topic, nowadays reaches a new dimension. Due to MR, struc-

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# Nancy juin 1987

DENIS MELANÇON

J'ai eu le plaisir et l'avantage d'assister au premier cours international de neuroradiologie interventionnelle à Nancy les 17, 18, 19 et 20 juin derniers sous les hospices de la Société Française de Neuroradiologie, cours organisé et présidé par le professeur Luc Picard du CHU de Nancy.

Revoir Nancy était pour moi un plaisir, j'y avais déjà séjourné quelques semaines en 1977 dans le cadre d'un mini-sabbatique qui m'avait conduit de Paris à Nancy et à Marseille, et j'avais déjà pu apprécier le talent et l'amabilité de Luc Picard. Ce plaisir fut amoindri du fait du temps pluvieux et frisquet qui nous attendait à l'arrivée et qui dura toute la semaine. Mais le plaisir de revoir Luc Picard et son équipe, d'entendre les exposés des experts invités et leurs discussions, ce plaisir dis-je, me fit facilement oublier la déception du mauvais temps.

Qu'y ai-je appris? Que l'école française de neuroradiologie interventionnelle demeure à l'avant-garde,

que ce qui s'annonçait déjà en 1977 est devenu réalité et que Luc Picard y joue toujours un rôle de leader.

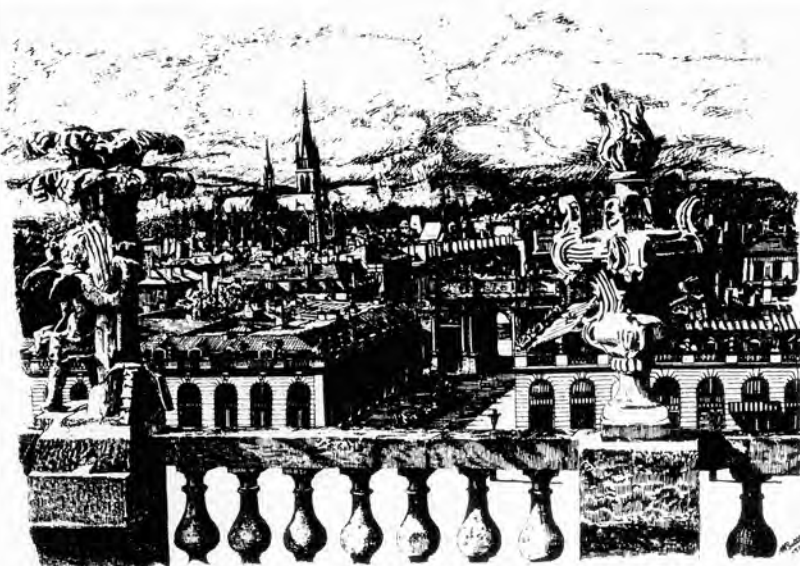
Que son esprit critique permet que la crédibilité demeure, que la place

de cette activité soit acquise et que l'avenir soit prometteur

Je vous montre comme exemple cet anévrysme de l'artère basilaire que Jacques Moret de Paris a traité par ballon alors que l'approche chirurgicale s'était avérée impossible de par la condition générale du patient.

Et j'allais oublier le programme social! Nancy et son charme, et son passé, et la place Stanislas, et ces soirées que Luc avait préparées pour nous! Je vous en montre ici quelques souvenirs. Sans oublier l'amitié de Jacques Roland et le sourire de Christiane Moret.

Bravo Luc Picard et à bientôt!



# The Pituitary Stalk in the Primary Partial Empty Sella

**D. TAMPIERI**  
**D. MELANÇON**

Classically, the pituitary stalk in the empty sella phenomenon is described running from the hypothalamus into the sella close to the dorsum in the midline.

A 40 years old man suffering for headache presented two episodes of loss of consciousness and was referred to the Montreal Neurological Hospital and Institute to be submitted to MR. The examination demonstrated a partial empty sella. The signal from the sella content was hypointense in the T1-weighted image and became hyperintense in the T2-weighted image changing as does the signal from the CSF (Fig. 1, 2).

The thin pituitary gland was lying on the floor of the sella. Moreover, the two different signals isointense and hyperintense from the adeno- and neurohypophysis, respectively, were nicely detected.



Figure 3

There was no evidence of herniation of the optic structures in the pituitary fossa. Finally, the pituitary stalk was visualized in all its extension (Fig. 1). However, as an unusual finding, it was running into the pituitary fossa close to the dorsum sellae, deviated toward the right side (Fig. 3). In particular, the stalk was deviated but not bulged as expected if a space occupying le-

sion such as cystic pituitary adenoma or a Rathke cyst would have been present.

In addition, no abnormal signal was detected in the residual pituitary gland, suggesting a previous pituitary apoplexy.

This observation can help us make the following statements:

1. The pituitary stalk always has to be demonstrated with coronal and sagittal view during a MR of the pituitary region.
2. Usually, it runs in the midline but if deviated, this does not signify the presence of space occupying lesion involving the pituitary gland or previous pituitary apoplexy. However, it could be still in keeping with a primary partial empty sella.
3. If the pituitary stalk is not visualized or, more important, if it bulges in a curvilinear fashion, a pathology of the pituitary gland can be suspected.



Figure 1



Figure 2



## The 25th birthday of the American Society of Neuroradiology

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tures such as the limbic lobe and amygdala can be visualized with a detailed anatomy «in vivo».

Again, the increased sensitivity of MR opens a new vision on a large group of diseases such as degenerative diseases and movement disorders. In these fields, MR discovers a

new but natural contrast enhancement: iron. Because of the different quantities of iron deposits in the brain, structures such as substantia nigra, red nucleus, pallidum, putamen and U-fibers can be evaluated in both their normal and pathologic aspects.

Three scientific sessions were dedicated to interventional neuroradiology.

## Le 25ième anniversaire de la Société Américaine de Neuroradiologie

La Société Américaine de Neuroradiologie (ASNR) a fêté son anniversaire d'argent dans la ville de New York. Le congrès s'est déroulé du 10 au 15 mai derniers et a été organisé par le président en charge, le docteur Derek C. Harwood-Nash.

La résonance magnétique (RM) y a joué un rôle de premier ordre. Parmi plusieurs sujets qui ont démontré le statut artistique de la RM, le phénomène du flow, la mémoire, les maladies dégénératives, les moyens de contraste paramagnétique, l'ischémie cérébrale, la selle turcique et la colonne vertébrale, et la moëlle épinière se sont avérés les sujets les plus intéressants.

Plus particulièrement, l'angiographie par RM nous donne un aperçu du futur, et bien que la comparaison avec l'angiographie traditionnelle ne soit pas encore possible, surtout en ce qui concerne les problèmes techniques, seulement quelques images d'angiographie par RM auront été suffisantes pour faire naître en nous l'idée de la fin de la technique par cathétérisme.

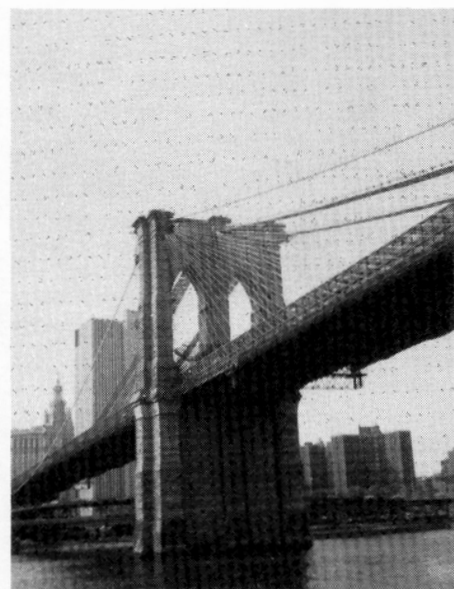
La mémoire, les maladies dégénératives et les désordres du mouvement représentent un large champ de travail clinique. Premièrement, la mémoire, cet hôte le plus profond de notre cerveau et qui a toujours été un sujet fascinant, atteint aujourd'hui une nouvelle dimension. Grâce à la RM, des structures telles que le lobe limbique et l'amygdale

peuvent être visualisées in vivo avec une grande précision.

Et puis, la grande sensibilité de la RM ouvre une nouvelle vision sur un large groupe de maladies, comme les maladies dégénératives et les désordres du mouvement. Dans ce domaine, la RM découvre un nouveau contraste, naturel celui-là: le fer. Les différentes quantités de fer présentes dans les structures du cerveau, telle que la substantia nigra, le nucleus ruber, le pallidum, le putamen et les fibres en U, peuvent être évaluées dans leurs aspects tant normal que pathologique.

Trois sessions scientifiques ont été consacrées à la neuroradiologie interventionnelle. Le détachement du ballon dans un anévrisme intracranien semble être à la fois la façon «chic» de traiter une lésion et la mesure d'un nouveau pas dans la neuroradiologie thérapeutique.

Rivalisant avec le programme scientifique, le programme social s'est révélé plein d'événements intéressants et amusants. Durant les après-midis libres, différents tours ont été organisés dans les coins les plus intéressants de New York. Le Musée d'Art Moderne a été le théâtre d'une réception. Un concert au Carnegie Hall a donné à tout le monde l'opportunité d'apprécier une des meilleures acoustiques du monde. En tant qu'Européenne, j'ai particulièrement apprécié la réception spéciale donnée pour nous dans la



Tour du Hilton. Le congrès s'est terminé avec un banquet folklorique dans Central Park.

Et pour mettre en pratique le motto latin, «mens sana in corpore sano», des périodes de jogging étaient organisées dans Central Park à 6h30 tous les matins.

Même si cette semaine s'est déroulée très vite, nous avons eu la chance d'apprécier le feeling de la ville.

C'était là ma première participation au Congrès de la Société Américaine de Neuroradiologie, mais je suis certaine que nous nous rencontrerons à Chicago pour le 26ième Congrès l'an prochain.

gy. The detachment of a balloon in an intracranial aneurysm appears at the same time to be the «chic» way to treat such a lesion, and is the measure of a new step in interventional neuroradiology.

The social program provided a perfect balance to the scientific sessions, being full of interesting and amazing events.

During the free afternoons different tours were organized to the main points of interest in New York City. The Modern Art Museum was the site of the reception party. On Tuesday evening, a concert at Carnegie Hall gave everybody the opportunity to appreciate one of the

best «acoustics» in the world. As a European, I have particularly appreciated the special reception given specifically for us at the Hilton Tower. The meeting ended with a folkloric banquet in Central Park.

As a latin motto «mens sana in corpore sano», an early jog was organized through Central Park at 6.30 AM each morning.

Although this busy week passed very quickly we could appreciate the feeling of this great city.

This was my first attendance at the ASNR but I am sure we will meet in Chicago for the 26<sup>th</sup> meeting next year.



## Il venticinquesimo compleanno della Società Americana di Neuroradiologia

La Società Americana di neuroradiologia (ASNR) ha celebrato il suo anniversario d'argento a New York. Il Congresso, svoltosi dal 10 al 15 maggio, è stato organizzato dal Presidente in carica, Dr Derek C. Harwood-Nash.

La Risonanza Magnetica (RM) ha svolto il ruolo di protagonista. Nell'ambito dei 150 e più lavori presentati, atti a documentare lo «stato dell'arte» della Risonanza Magnetica, gli studi sul flusso cerebrale, i disturbi della memoria, le malattie degenerative, l'ischemia cerebrale, l'infarto cerebrale, la sella turcica, la colonna ed il midollo spinale hanno costituito gli argomenti più interessanti.

In particolare l'angiografia per MR è l'espressione del domani e, benché il paragone con l'angiografia tradizionale non sia ancora possibile, soprattutto per i notevoli problemi tecnici, solo poche immagini di angiografia per RM sono state sufficienti per farci intravedere la fine della tecnica per cateterismo.

La memoria e le malattie degenerative rappresentano un vasto campo di ricerca e lavoro clinico. La

memoria, ospite del nostro cervello più profondo, sempre stata argomento affascinante, raggiunge, oggi, una nuova dimensione: grazie alla RM strutture quali il lobo limbico e l'amigdala possono essere visualizzate con uno studio anatomico «in vivo».

L'elevata sensibilità della RM consente una visione nuova su di un vasto campo di malattie quali le malattie degenerative ed i disordini del movimento. In quest'ambito la RM ha scoperto un nuovo ma naturale mezzo di contrasto: il ferro. Grazie alle differenti quantità di ferro nelle diverse strutture cerebrali, la substantia nigra, il nucleo rosso, il pallido, il putamen e le fibre ad U possono essere studiati nei loro aspetti, normale e patologico.

Alla neuroradiologia interventzionistica sono state dedicate tre sessioni scientifiche. Il distacco di un palloncino in un aneurisma intracranico è al tempo stesso il modo «chic» di curare una lesione e la misura del nuovo passo della neuroradiologia terapeutica.

Per raggiungere un equilibrio perfetto con il programma scientifico il

programma sociale era pieno di avvenimenti interessanti e divertenti.

Durante i pomeriggi liberi differenti escursioni sono state organizzate per visitare i più interessanti angoli di New York. Il Museo D'Arte Moderna è stato teatro del party inaugurale. Nella serata di martedì il concerto alla Carnegie Hall ha offerto a tutti la possibilità di apprezzare una delle migliori acustiche del mondo.

In modo particolare, come Europeo, ho gradito l'invito al party al Hilton Tower organizzato per gli ospiti stranieri. Il Congresso si è concluso con un folcloristico banchetto a Central Park.

Come dice il motto latino «mens sana in corpore sano» ogni mattina alle 6:30 il jogging era organizzato attraverso Central Park.

Anche se questa indaffarata settimana è trascorsa velocemente abbiamo potuto sentire il feeling della città. Questa è stata la mia prima presenza al Congresso della Società Americana di Neuroradiologia ma, sono sicura, ci incontreremo a Chicago per il 26esimo Congresso l'anno prossimo.

# Unusual aneurysmal tumor of the basifrontal region

SUZANNE FONTAINE, M.D.,  
DAN BOGHEN, M.D.

The natural history of a cerebral aneurysm is either to increase in size or to remain unchanged<sup>(1)</sup>. We report an unusual case in which spontaneous reduction in size of a giant aneurysm was accompanied by remission of dementia.

## Case report

A 70-year-old woman was admitted in October 1982 for progressive deterioration of vision. Except for the presence of a right homonymous hemianopsia, the neurological examination was normal. A CT-Scan with contrast infusion showed a large midline frontal mass consistent with a giant aneurysm (fig. 1).

Digital subtraction angiogram confirmed the diagnosis of partially thrombosed giant aneurysm of the anterior communicating artery (fig. 2).

In the ensuing months, she developed rapidly progressive dementia and severe deterioration of vision leading to almost total blindness. A CT-Scan performed in January 1983 was unchanged by comparison with the previous one.

Because surgical treatment was considered impossible, she was transferred to a chronic care institution. She was then lost to follow-up for the subsequent three years. When next seen in October 1986, she was alert and well oriented. She was living alone and was able to look after her own needs. Vision had improved considerably but a right homonymous hemianopsia was still present. CT-Scan showed the aneurysm to have significantly decreased in size. There was focal cerebral atrophy of the right frontal lobe (fig. 3).

## Discussion:

Giant intracranial aneurysms, measuring 2.5 cm or more in diameter<sup>(2)</sup>, represent 5% of all verified cerebral aneurysms<sup>(1)</sup>. Symptoms and signs attributable to a mass effect, such as progressive focal neurological deficits, epilepsy and intellectual impairment, are the reason for initial presentation in 64% of cases. The remaining 36% of cases present with a subarachnoid hemorrhage<sup>(3)</sup>.

The most common location for giant aneurysms is the intracavernous portion of the internal carotid artery<sup>(2-4)</sup>. They also occur in the territory of the middle cerebral artery or in the vertebro-basilar system<sup>(3-4)</sup>. However, giant aneurysms of the anterior communicating artery complex are rare. In 1977, Maxwell

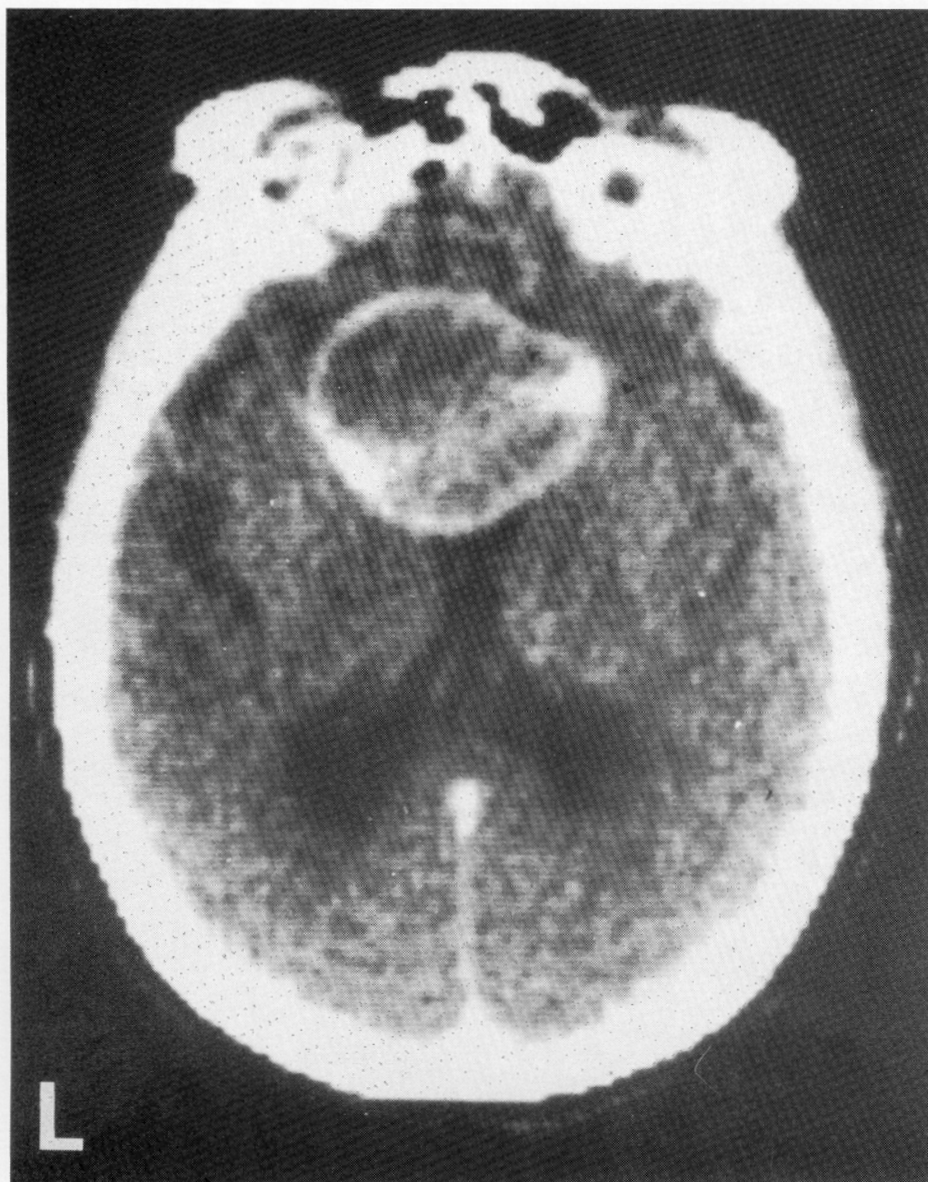


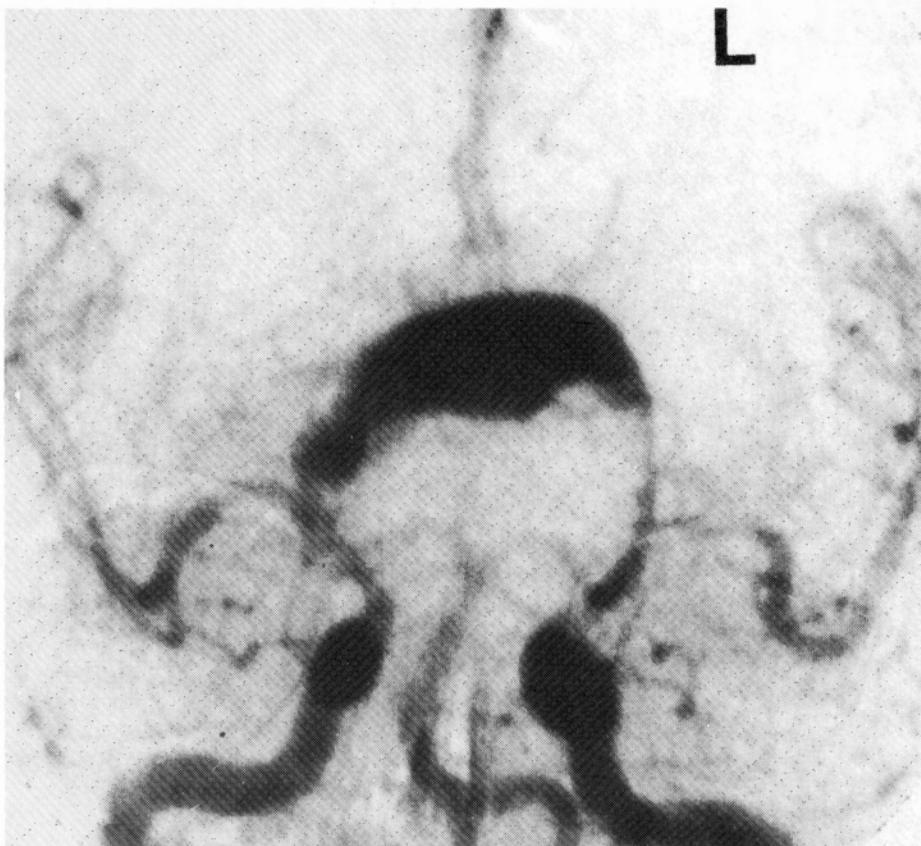
Figure 1

reported three patients presenting rapidly progressive dementia secondary to a giant aneurysmal mass in the basifrontal region<sup>(5)</sup>. All were successfully treated by direct surgical excision of the mass. While the present patient presented with a similar clinical picture, she spontaneously experienced improvement of her symptoms concomitant with spontaneous shrinkage of her aneurysm.

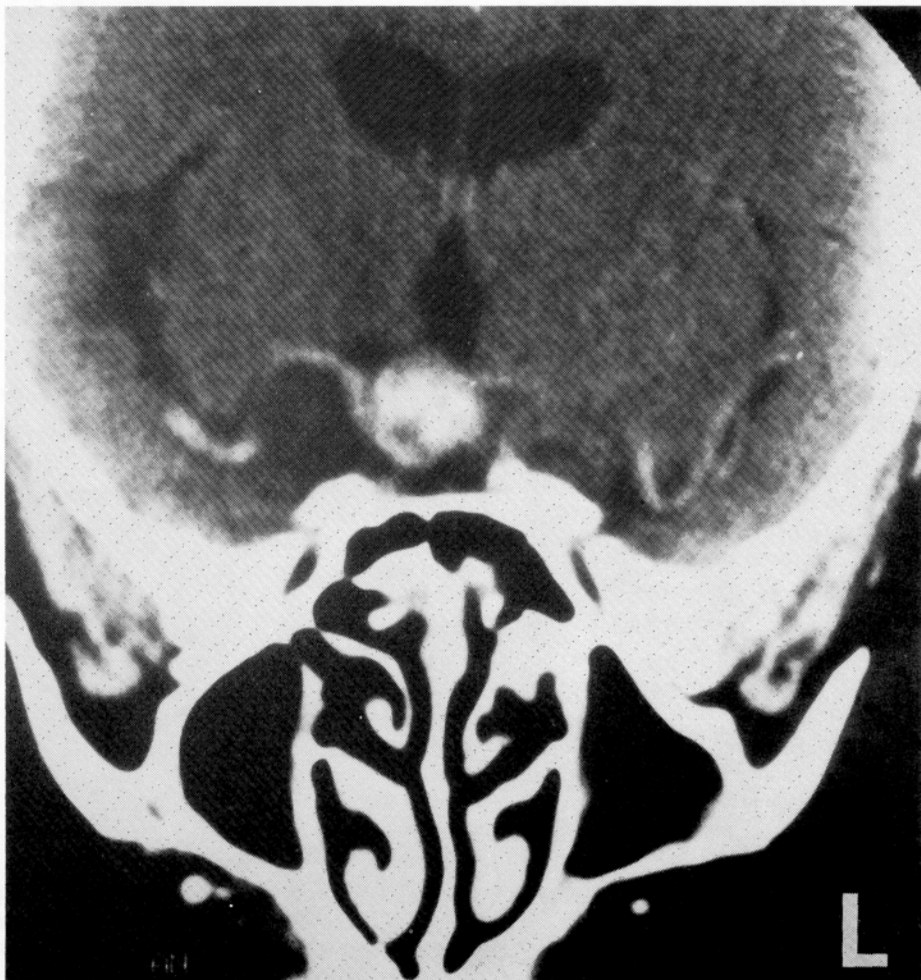
Spontaneous intra-aneurysmal thrombosis is a well documented phenomenon that has been noted in approximately 50 % of giant intracranial aneurysms<sup>(6)</sup> but regression of the aneurysmal mass is extremely rare. While the long term prognosis of giant aneurysms is characterized by considerable morbidity<sup>(3)</sup>, the course of events in our patient shows that occasionally significant clinical and radiological improvement may occur even in the absence of medical intervention.

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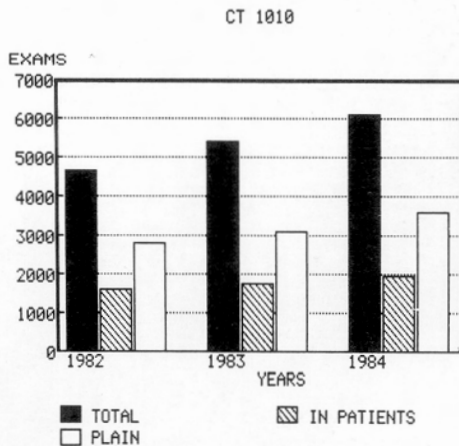
▲ Figure 2



▼ Figure 3

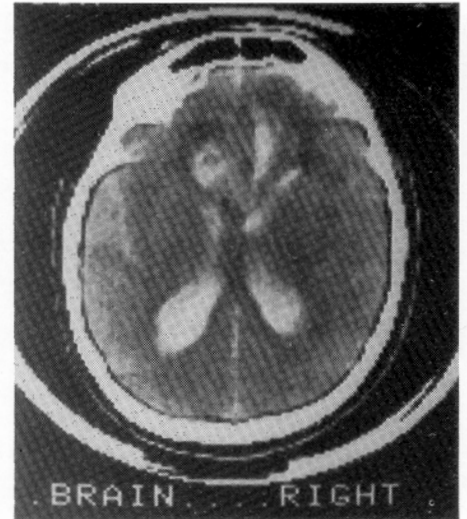
# EMI 1010

## DENIS MELANÇON



In June 1987, our old EMI Head Scanner has stopped its activities. Our original EMI 1005, installed in October 1973, had been updated to a 1010 in June 1977. Since this update, it has functioned exactly 10 years, producing 55759 examinations, that is over 5500 a year. This in itself is a proof of strong and reliable technology.

Last EMI head scan  
Hemorrhage from rupture of anterior communicating artery aneurysm. ►



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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.

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Friends and colleagues of Donald L. McRae may wish to show their gratitude for his influence and teaching in the field of Neuroradiology.

The proceeds of this fund will be used to promote education in this field, specifically, to develop new techniques in Interventional Radiology and to support the McRae Lecture in Neuro-Imaging.

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