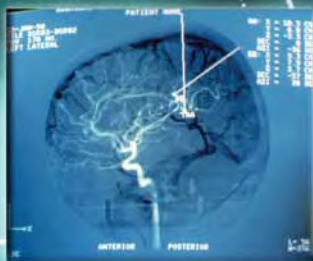
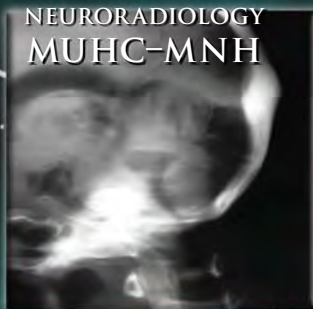


NEUROIMAGE

VOLUME 23, NUMERO 1
MAI 2007

VOLUME 23, NUMBER 1
MAY 2007

NEURORADIOLOGY
MUHC-MNH



Dr. Denis Melançon back when he started in 1966

LOOKING BACK While Approaching The Future



"Cover designed by Jean-Paul Acco at Neurophotography"

Greetings

此致

Afectuosamente

Respetos

Bäst Hälsningar

Alsalam alaykum

Saluti affettuosi

Namaste

Cordialmente Amicalement

O Genki De

敬意

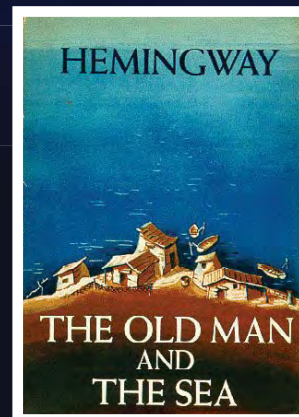
Herzliche Gruesse

Saudações



Sunset at Captiva Island, Florida

As I approach the sun setting on my medical career, the next few Neuro Images will be a retrospective that will recall mile stones in my professional life of 40 years at the Neuro. As an introduction, I present this picture of the sun setting at Captiva Island in Florida. While in Florida, I also had the opportunity to visit the former home of Ernest Hemingway. It was an appropriate excursion because nowadays I kind of feel like Santiago from The Old Man and the Sea, if you haven't read it yet, go find a copy ...



"I like to listen. I have learned a great deal from listening carefully. Most people never listen."

– Ernest Hemingway

I would like to also invite you to share stories, photos or momentos from the past 40 years, I may need some help with the accuracy of some events. So please keep in touch and visit NeuroImage's website <http://www.mni.mcgill.ca/neuroimage/index.html>



Ernest Hemingway's house in Key West, Florida

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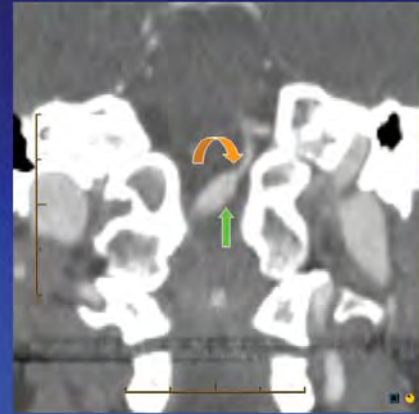
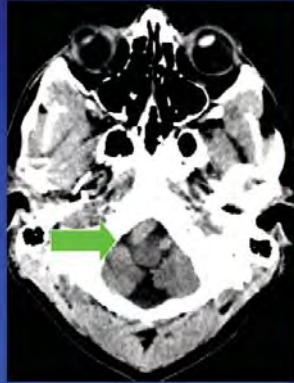
INTRADURAL VERTEBRAL ARTERY DISSECTION PRESENTING WITH SUBARACHNOID HEMORRHAGE

A SLIDE PRESENTATION BY DR. DONATELLA TAMPIERI

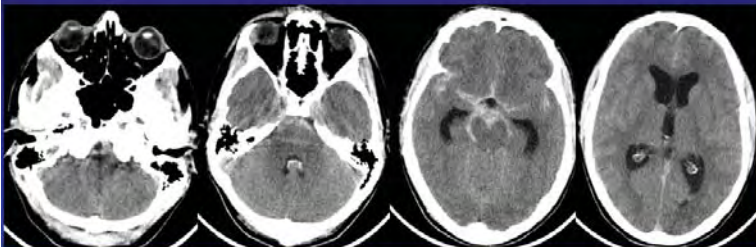
This a case study in a powerpoint format, that I gave during last April's Study Club. The slides present the case description, the symptoms, the CT scans, the angiograms, an illustration of the pathology and the treatment suggested.

Case description: 33 y.o. male

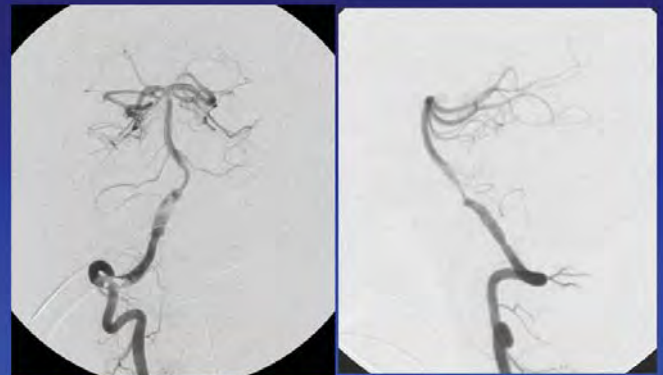
- Drug addict
- Severe Headache
- Neck pain
- LP: positive
- CT plain shows focal dilatation of the right vertebral artery



CTA confirms the focal dilatation (↑) followed by a focal stenosis (↪)

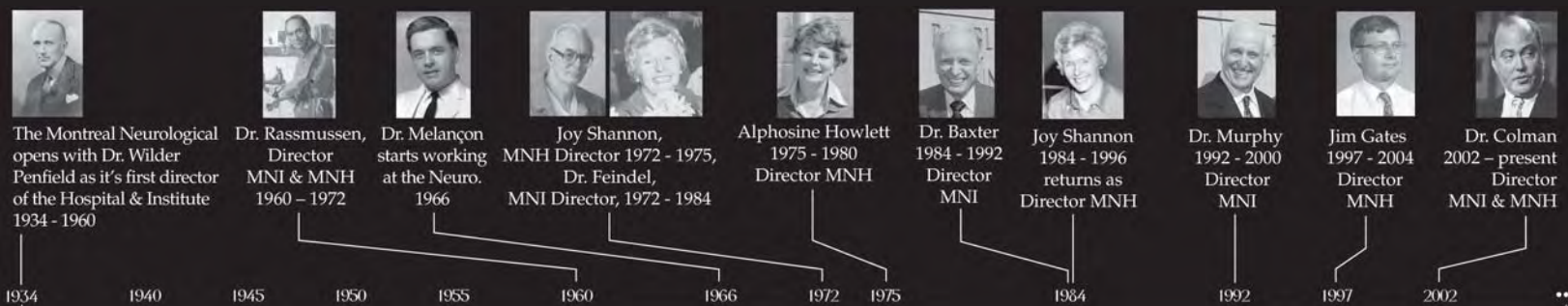


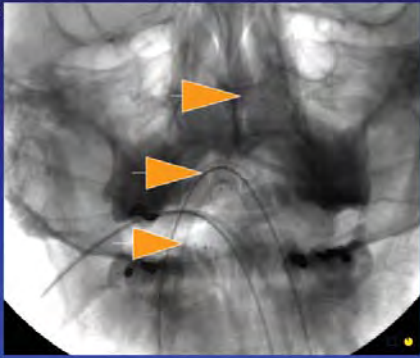
- 24 hours later the patient presented sudden onset of headache and loss of consciousness.
- The CT demonstrated subarachnoid, intraventricular hemorrhage and acute hydrocephalus.



Angiogram of the right vertebral artery demonstrating a pseudo-aneurysm involving the intradural portion of the vertebral artery, compatible with intradural vertebral dissection

THE HOSPITAL & INSITUTE DIRECTORS THROUGHOUT THE YEARS





- Two Neuroform Stents were placed in the dissecting aneurysm in telescopic fashion.
- The arrows-heads indicate the stents markers.

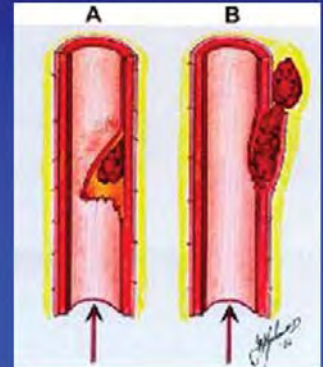
Vertebral artery dissection

- Elevation and separation of the intima from the media or ,less frequently, of the media from the adventitia leading to:
 - ➡ Reduction of the arterial lumen
 - ➡ Formation of a blind pouch (pseudoaneurysm)
 - ➡ False lumen (rare)

Carotid/Vertebral Dissection: Pathophysiology

- Traumatic: penetrating injury, neck trauma rapid neck movement ,manipulation,effort.
- Spontaneous : in pts with connective tissue disorders (FMD, cystic medial necrosis, Marfan, Ehlers-Danlos type IV)

- In case of subintimal hemorrhage: arterial narrowing
- In case of sub adventitial hemorrhage: pseudoaneurysm formation (like the case presented)
- Since the intracranial media is very thin a sub adventitial dissection may cause SAH



Vertebro-Basilar Dissection: Clinical Presentation

- Neck pain
- Headache
- Sign of Brainstem Ischemia in case of intracranial extension (50%)
- 26-43% of pts present with Wallenberg
- Vertigo
- Nausea, vomit
- Spinal Cord Ischemia

Vertebro-Basilar Dissection

- 10% mortality in VA dissection
- 11% recurrence rate in the first 10 years, 1% after

JP Koehan et Al. :Carotid and Vertebral Dissection, eMedicine

THE DIRECTORS OF NEURORADIOLOGY THROUGHOUT THE YEARS



1934, The Neuro opens with Dr. Penfield as it's first director, he assigns Dr. Cone as Head of Radiology



Dr. Childe Radiology's 2nd director



Dr. McRae Radiology's 3rd director



1967, Dr. Ethier becomes the director of Radiology



1995, Dr. Melançon becomes the director of Radiology



1999, Dr. Tampieri becomes the Director of Radiology



Vertebral Dissection: Treatment

- Conservative
- Occlusion of the parent artery
- Stenting of the dissection
- Stenting and coiling of pseudoaneurysm

- 16 pts with intracranial vertebral pseudoaneurysm were treated with parent artery occlusion

W Halbach et Al: J of Neurosurgery, 1993;79(2): 183-191

- 29 pts with SAH caused by Vertebro-basilar dissection
- Tx: 14 conservative
13 occlusion of parent artery
2 coils of pseudo-aneurysm

Re-bleed was observed in 9 pts during the first 12 days in the group of patients treated conservatively. No case of re-bleed in cases treated endovascularly

B Ranegren et Al: Neuroradiology 2005 Feb;47(2):97-104

Treatment

- Conservative: anticoagulation or antiplatelets
- Endovascular: occlusion of the parent artery reconstruction of the arterial wall with stent (use of coils is debated)

We are proposing telescopic insertion of stents (two in this case) to seal the flap and reconstruct the inner arterial lumen with juxtaposition of the intima and media to the adventitia.

MAJOR ADVANCEMENTS IN RADIOLOGY SINCE 1934



1942, Austrian, Karl Dussik first applies Ultrasound to medicine



1952, in the U.S.A., physicists, Felix Bloch at Stanford & Edward Purcell at Harvard develop Nuclear Magnetic Resonance (NMR) & share the Nobel Prize for Physics



1973, in the U.S.A., Michael E. Phelps & Edward J. Hoffman develop the positron emission tomography (PET) scans



1979, Allan Cormack of Tufts University & Godfrey Hounsfield of EMI Labs in England develop computerized tomography and share Nobel Prize in Physiology



2003, American chemist Paul C. Lauterbur & British physicist Peter Mansfield develop Magnetic Resonance Imaging (MRI) and share the Nobel Prize for Physiology or Medicine

1934 1940 1945 1950 1955 1960 1967 1975 1980 1985 1990 1995 1999 2007 ...

NEUROANGIOGRAPHY



Dr Tampieri with the General Electric application specialist

Since the beginning, Neuroradiology has always acquired the best for taking X-rays.

In the 60's, angiography was performed with a Schönander Changer, serial six films.

In the 70's, a Franklin roll film changer was used with a Picker stereoscopic tubes system.

In the 80's, a digital angiography unit was introduced by Technicare, which was replaced after a few years by a Siemens angioscope, upgraded over the next 20 years.

We recently acquired the GE unit shown in the picture.

Stereoscopic angiography has remained our golden standard all over the years.

MAJOR EVENTS IN RADIOLOGY AT THE NEURO



1989, The Exhibit for ASNR



1976, the Neuro installed the Body Scanner,



1984, the propulsion chamber



1987, the Siemens Angioscope

1995, Dr Melançon celebrates X-Ray's Centennial with an exhibit at the McCord Museum



2006?, this is the new GE scanner??



1934, The Neuro opens it's doors



1960, Dr. Feindel installed the Saskatoon Contour Scanner (the grandfather of PET) for gamma detection & the Cone Lab opens.



1960, Stereoscope



1973, Dr. Feindel installed the CAT Scanner, the first in Canada



1984, The MRI is installed in the Webster Pavillion

ANTONIO PACCHIONI

Italian anatomist, born June 13, 1665, Reggio nell'Emilia; died November 5, 1726, Rome.

Pacchioni's most important works particularly concerned the anatomy and function of the dura mater. His first dissertation on this dates from 1701 on, the most important being *Dissertatio epistolaris de glandulis ...* (1705) in which he described the arachnoid granulations which are named after him.

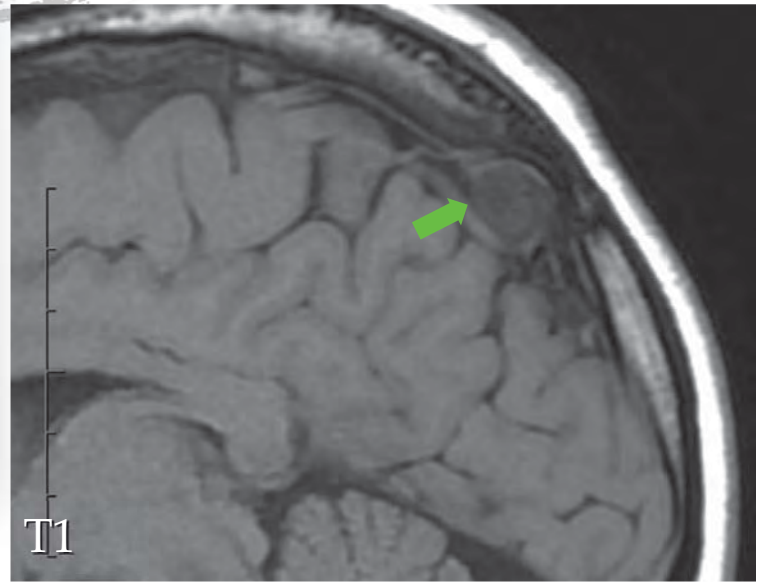


ANTONIO PACCHIONI

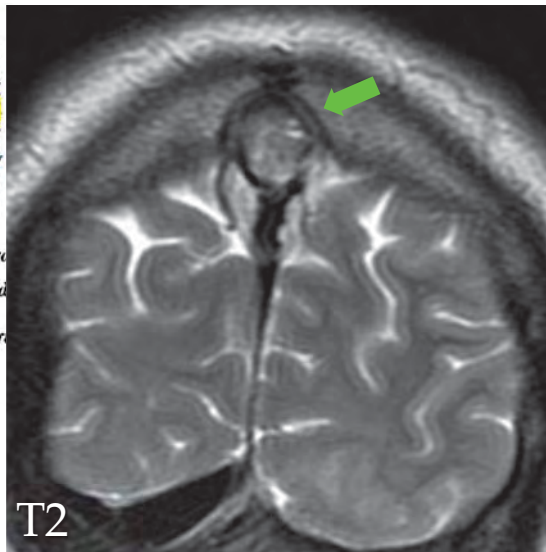
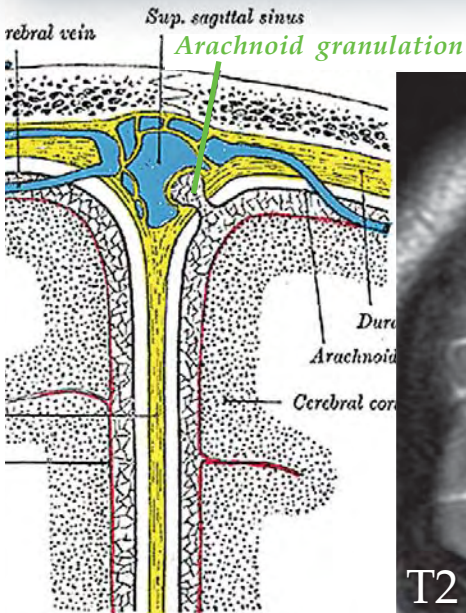
DAL MEDAGLIONE DELL'HAMERANI



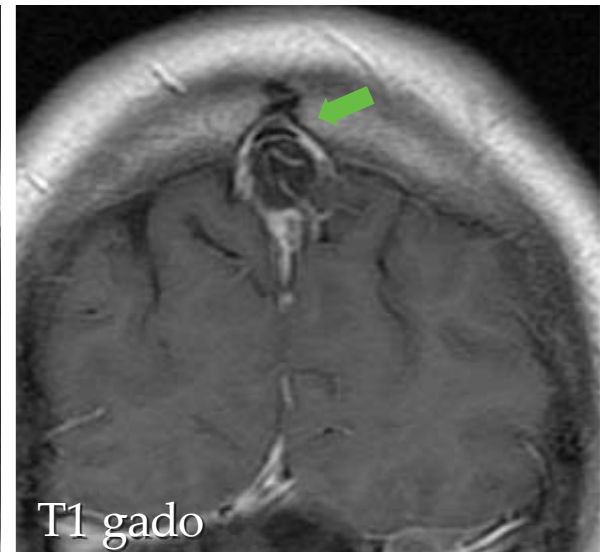
A sculpture of 3 Venetians at the Museum of Arts, Naples, Florida



T1



T2



T1 gado

THE HERON

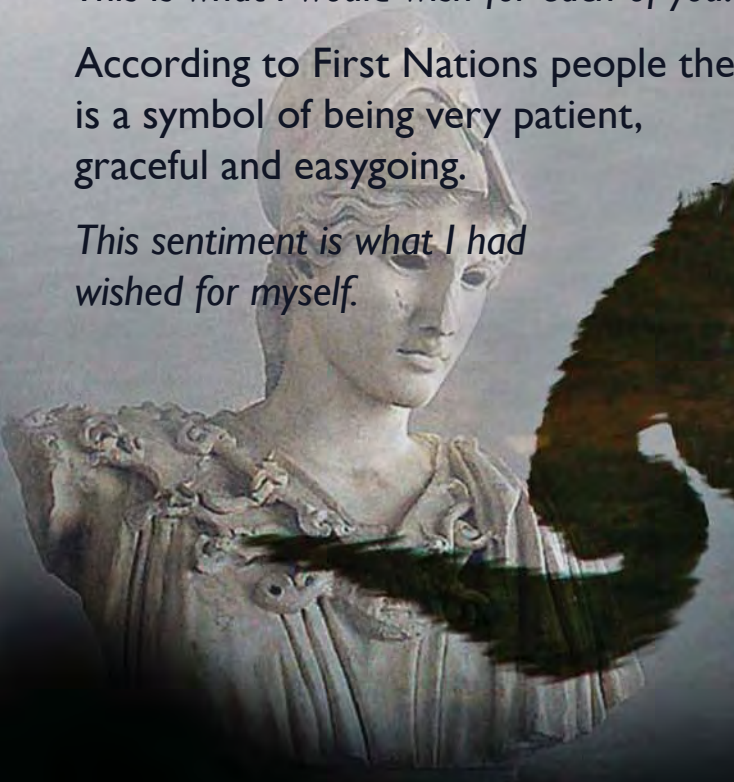
Athena, the Greek goddess of wisdom, employed a Heron as one of her divine messengers, a symbol of righteousness, also a symbol of contemplation, vigilance, divine wisdom, and inner quietness.

In Chinese tradition, long-necked birds such as cranes, egrets, and herons represent longevity and good fortune.

This is what I would wish for each of you.

According to First Nations people the Heron is a symbol of being very patient, graceful and easygoing.

This sentiment is what I had wished for myself.



One more picture: I took a picture of this blue heron during that same vacation in Southwest Florida

