

*40 YEARS OF ACOUSTIC
NEUROMAS:
MORE THAN 2000 CASES
(1964 - 2005)*

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Before 1964:

The diagnosis was too late: large tumor, intracranial hypertension

The mortality after opération was not less than 25% of the cases.

In the sixties

William House and William Hitselberger introduced the method to make an early diagnosis and the trans-temporal approaches to minimise the sequelae and the lethality .

The diagnosis of the acoustic neuroma (A.N)

- 1- *UNILATERAL* otological symptom:
progressive or sudden deafness
tinnitus, with or without a vestibular sign
evokes the possibility of a *TUMOR*.
- 2- *NO PARALLELISM* between the *SIZE*
of the *TUMOR* and the *SYMPTOMS* !!!

The Methods of the diagnosis

- 1- Tonal audiometry with speech discrimination
- 2- Bera
- 3- Vestibular test
- 4- Imaging: CT Scan , MRI

The Evolution of the management

1- Before MRI: the majority of the A.N were operated. The otological approach with the operating microscope enabled substantial progress :

death 0.5% ,

- hearing is preserved in some cases ,
- facial function is preserved ,
- total removal of the tumor.

2- With the MRI management of the A.N has progressed :

A small tumor is followed by MRI

Three possibilities :

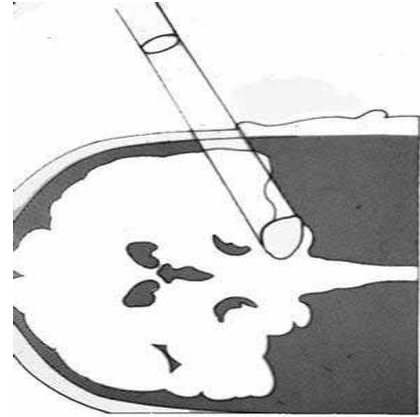
- No growth
- Spontaneous reduction
- The growth is 1 or 2 mm per year
treatment is considered : either surgery or radiotherapy ?

For small tumors surgical treatment is indicated

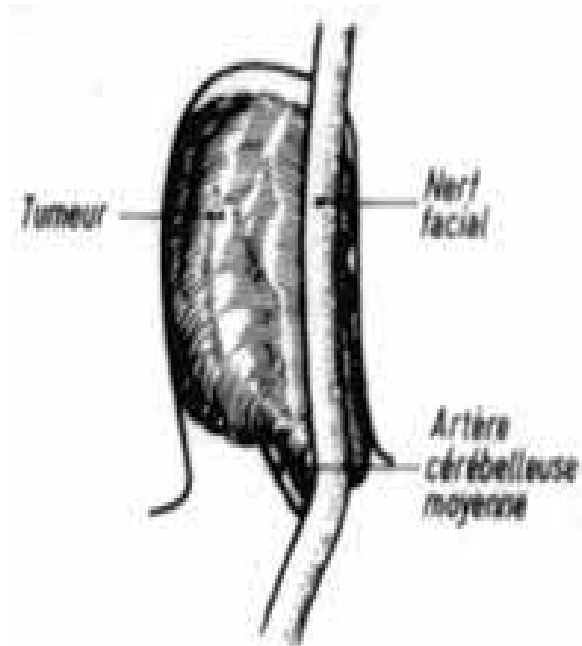
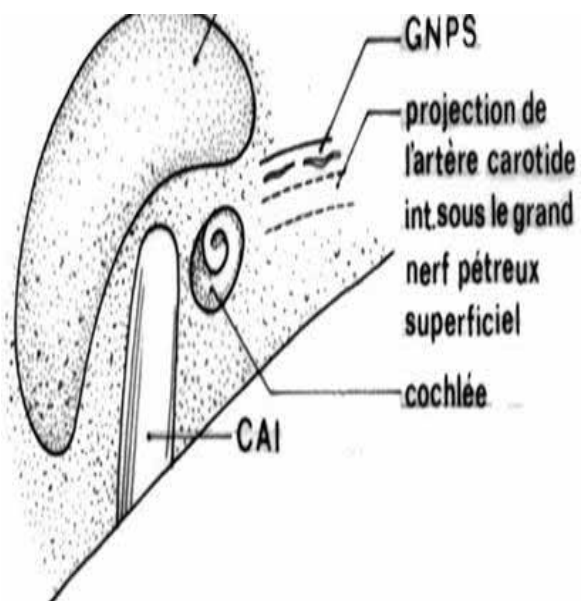
- When symptoms arise : as Vertigo, 7 N and 7 bis N disabilities.
- When Hearing is no longer fonctionnal.
- When the tumor grows rapidly.

The approaches are :

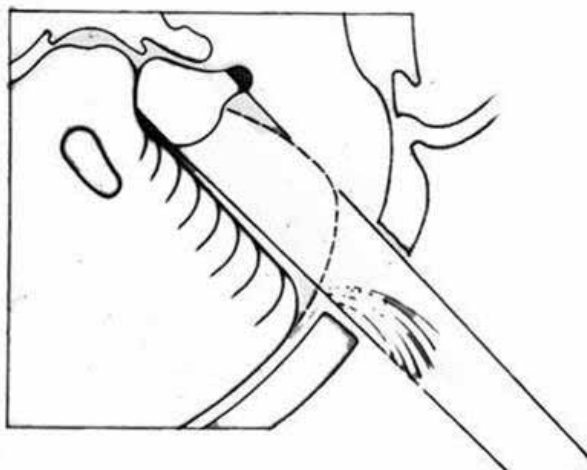
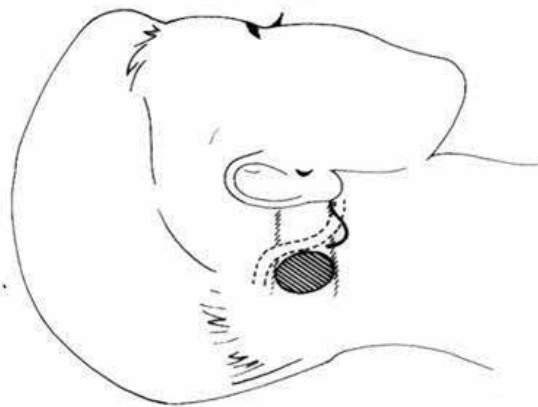
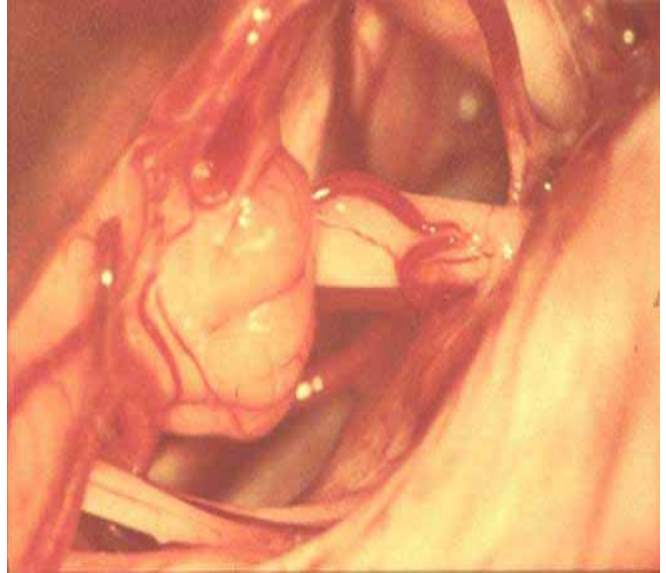
1- Middle fossa approach for hearing preservation in intracanalicular tumors



Example: A.N operated in 1973 by MFA with hearing preservation.



2- Retrosigmoid approach for hearing preservation of tumors less than 1.5 cm in the CPA .



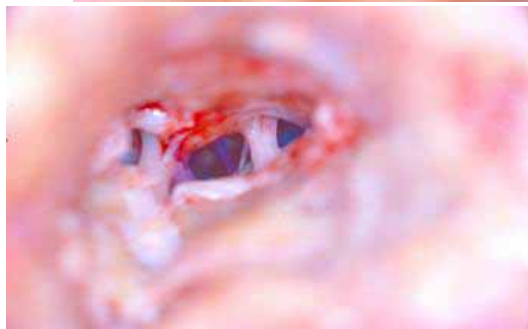
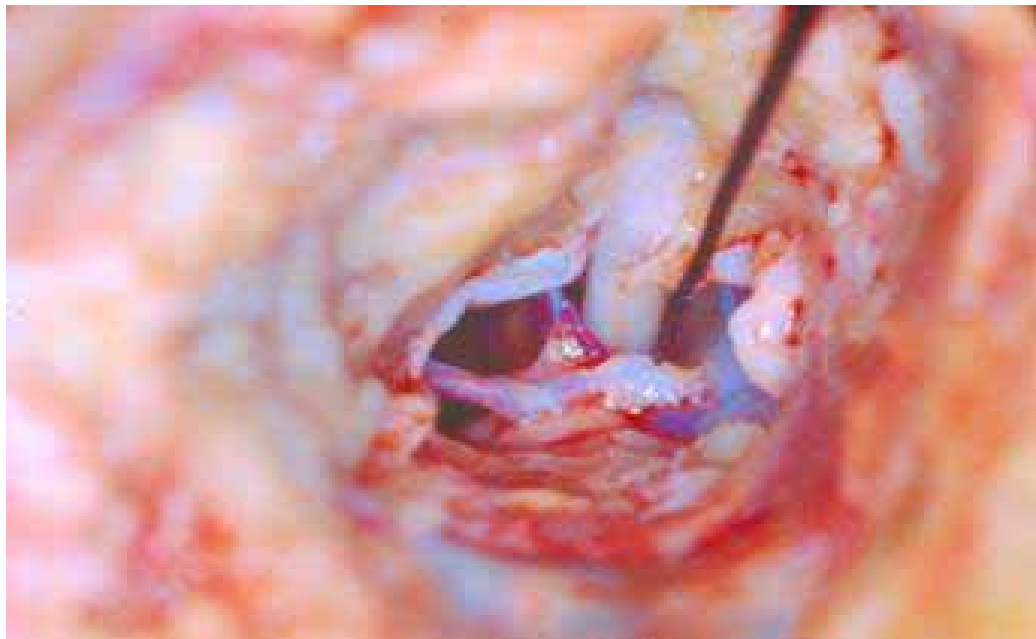
Gamma Knife

- **Advantage** : ambulatory treatment
The growing stops but the tumor does not completely disappear.
Generally hearing is preserved
Facial palsy may occur
- **Disadvantages** :
regrowth : surgery may be more difficult.
Exceptional malignant degeneration

For large tumor Surgery is the unique treatment

We prefer the trans-labyrinthine approach :

- 1- Direct approach through the mastoid
- 2- No retraction of the cerebellum
- 3- Preservation of the facial nerve
- 4- Rapid access in case of post op hemorrhage



The objective of the otosurgeon:

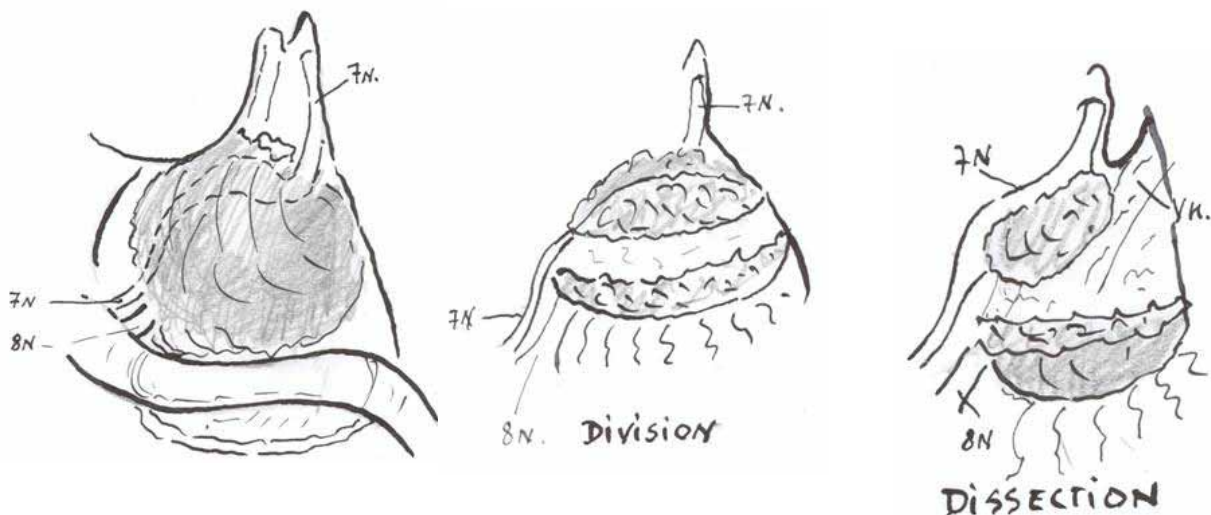


- Total removal of the tumor.
- Preservation of the facial nerve.

THE TECHNIQUE

- 1) The 7 N is discovered in the meatus, and at the brainstem .
- 2) Removal of the tumor in the meatus
- 3) *Debulking* inside the tumor
- 4) Dissection of the 7 N from the brainstem
- 5) *Division* in two parts of the tumor
- 6) Removal of the lateral part
- 7) Removal of the medial part

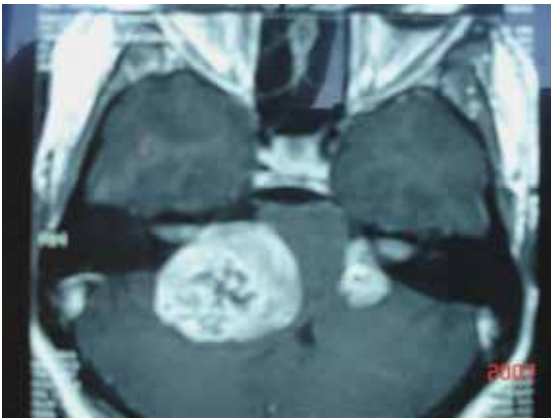
THE TECHNIQUE



For young patients

The NF2 test must be done

- _ familial history
- dermatology : « tache café au lait »
- ophtalmology: juvenile cataract
- medullar MRI
- DNA analysis for gene mutation
(blood sample)



N F 2

If total deafness occurs:

The brainstem implant,

Will be placed to restore hearing

(O.Sterkers and M.Kalamarides)

Surgery of the C.P.A.

By whom ?

The Otologist ? : *The facial nerve !*

The Neurosurgeon ? : *The brainstem !*

A Team ? : *The best*

BEWARE :

Even in small tumor surgery a severe complication may occur.



During all these years I was assisted by Pascal CORLIEU who organized twelve courses of anatomical dissections in hospital Cochin; University Paris V .



I was very honored to be decorated with the Cross of the Arabian Republic of Egypt for teaching the residents of the college des Hopitaux de Paris:

Pr Mandour, Pr M.Shehata ,Pr Talaat
Pr M.Badr El Dine , Dr Hanni.El Gareem ,
and Dr Sherif.Guindi...



Special thanks , to my faithful assistant and friend, Mustapha Smail; to Pr Olivier Sterkers who continues to perfectione the otoneurosurgery and to the President of the Congress M Badr el dine who introduced this surgery
in Alexandria.