



8<sup>th</sup> World Congress  
of Neuroendoscopy



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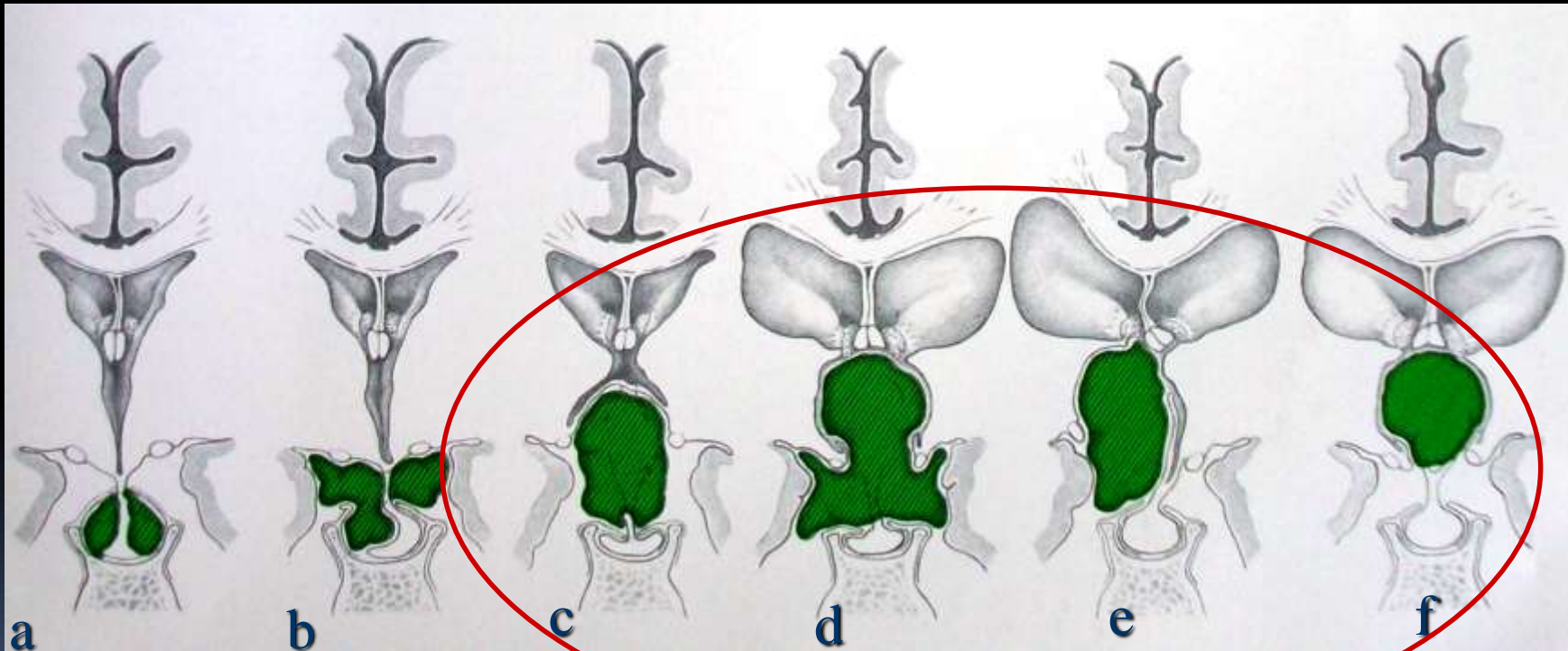
# PURE VENTRICULAR NEUROENDOSCOPIC APPROACH TO THE THIRD VENTRICLE CYSTIC CRANIOPHARYNGIOMAS

# Introduction

- Craniopharyngiomas are histologically benign lesions, but may develop at any point along the pituitary-hypothalamus axis, even in the 3<sup>rd</sup> ventricle. In presence of hydrocephalus microsurgical or endoscopic removal of these lesions becomes much challenging because of the relationship with vital structures. In case of elderly or recurrence palliative treatments are advocated. Alternatively, a cystic craniopharyngioma can be treated by intracavitary bleomycin or radiosurgery. In this case, ventricular neuroendoscopy is an option to treat intracranial hypertension in adjunct to adjuvant treatments.

# Craniopharyngioma Subtypes

(Yasargil MG et al, J Neurosurgery 1990)

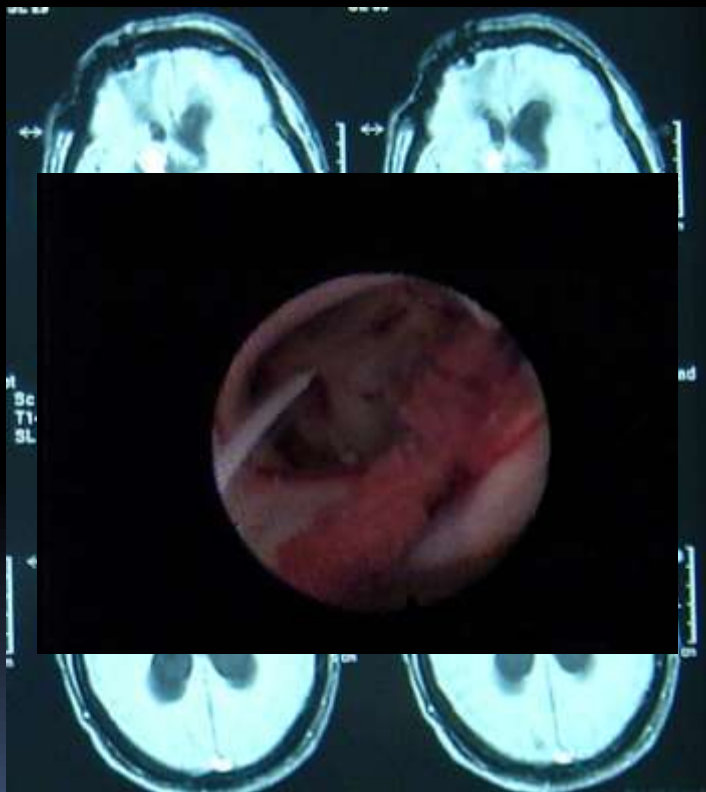


# Clinical Data

Case	Age	Clinical History	KPS	Obstructive Hydrocephalus	Neuroendoscopy	Postendoscopy Treatments
1	35	Postsurgical recurrence	60	Yes	Septostomy + Ommaya	Intracystic bleomycin
2	58	Postsurgical recurrence	60	Yes	Septostomy + Ommaya	Intracystic bleomycin
3	17	Newly diagnosis	70	Yes	Cystotomy	Microsurgery Combined Approach
4	48	Newly diagnosis	70	Yes	Cystotomy + Biopsy	After 8 m. Microsurgery + Radiosurgery
5	75	Newly diagnosis	60	Yes	Partial Tumor and Cyst removal by Tm Laser	After 1 yr. Radiosurgery
6	57	Postsurgical Cyst recurrence	70	Yes	Septostomy + Cistostomy + Ommaya	Clinical follow-up
7	69	Newly diagnosis	60	Yes	Partial Tumor Tm Laser Resection + Septostomy	After 6 m. Radiosurgery

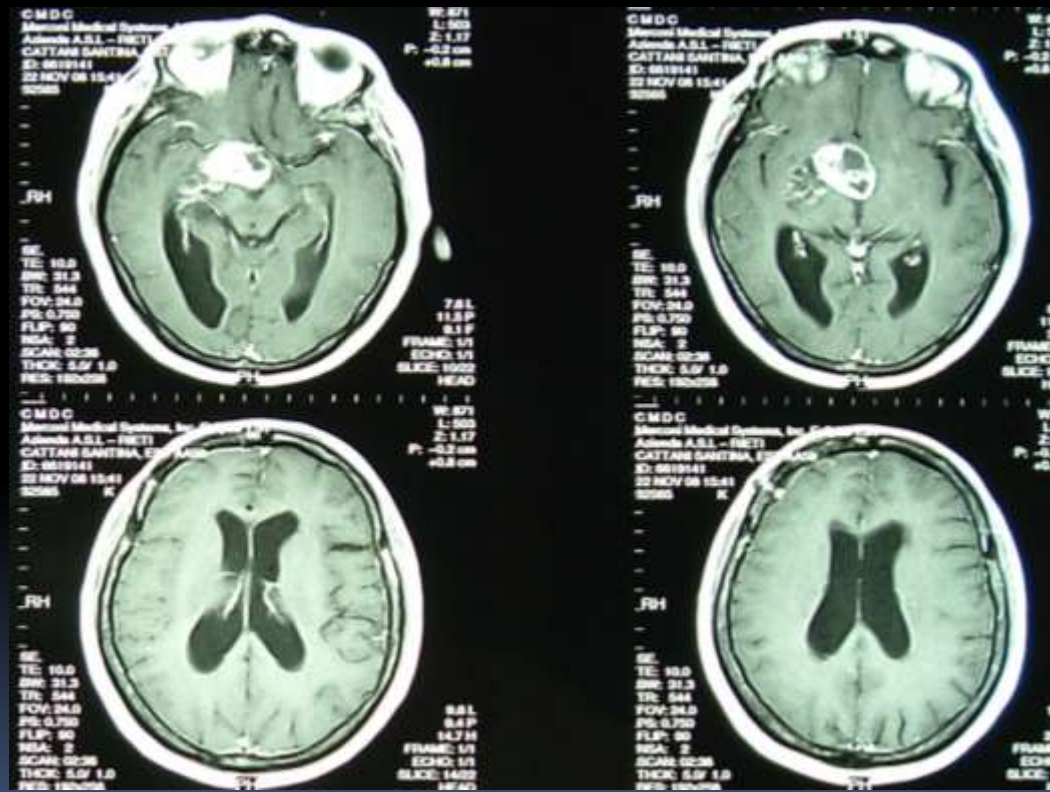
# Case 2 postsurgical recurrence Septostomy and Intracavitary Bleomycin

PRE ENDOSCOPY



CRANIOPHARYNGIOMA

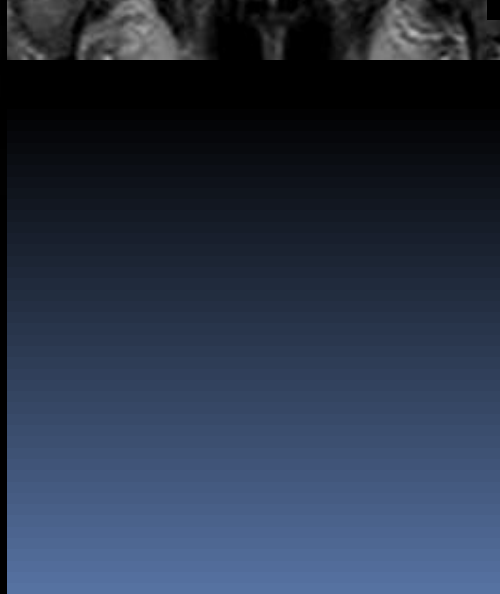
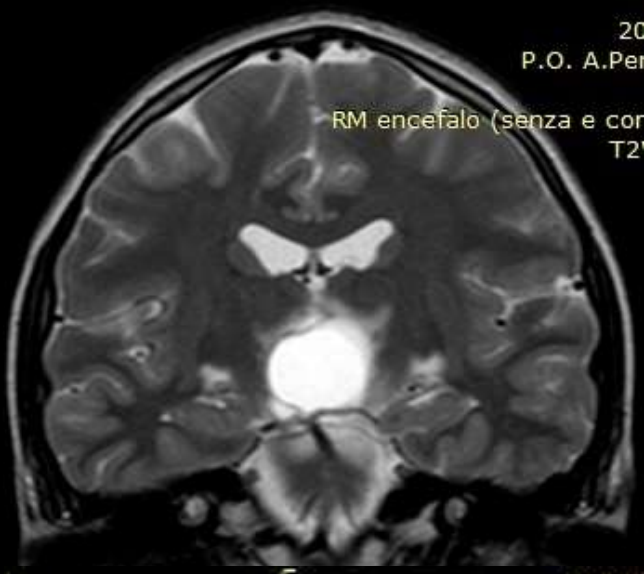
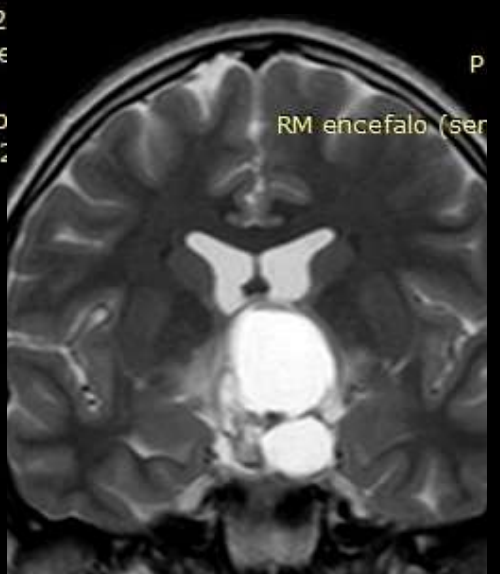
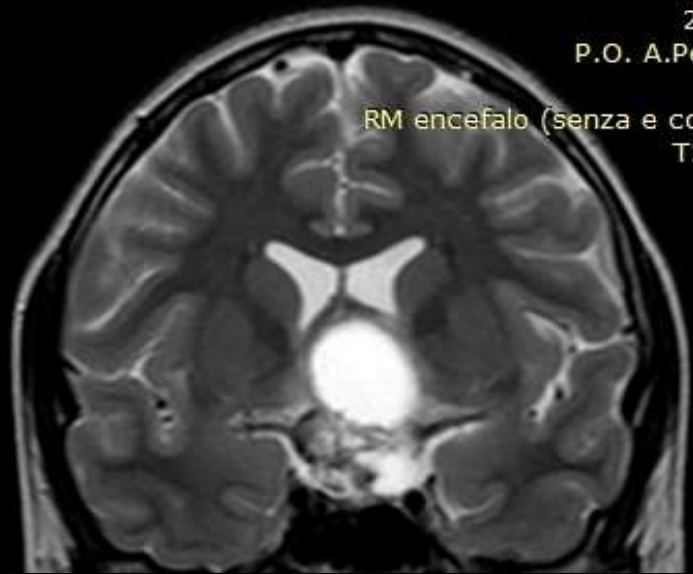
POST TREATMENT 10 yrs



Bleomycin 10 mg/day for 8 days



# Case 3 Preop NMR T2



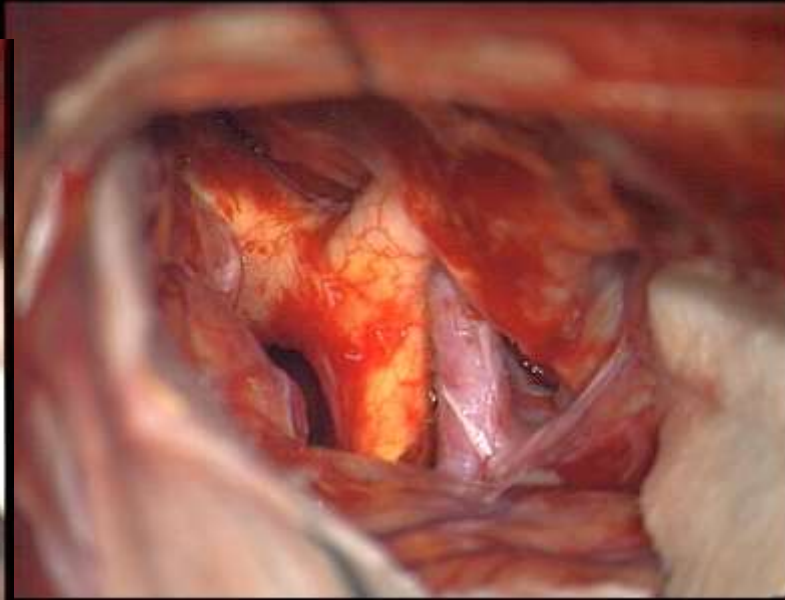
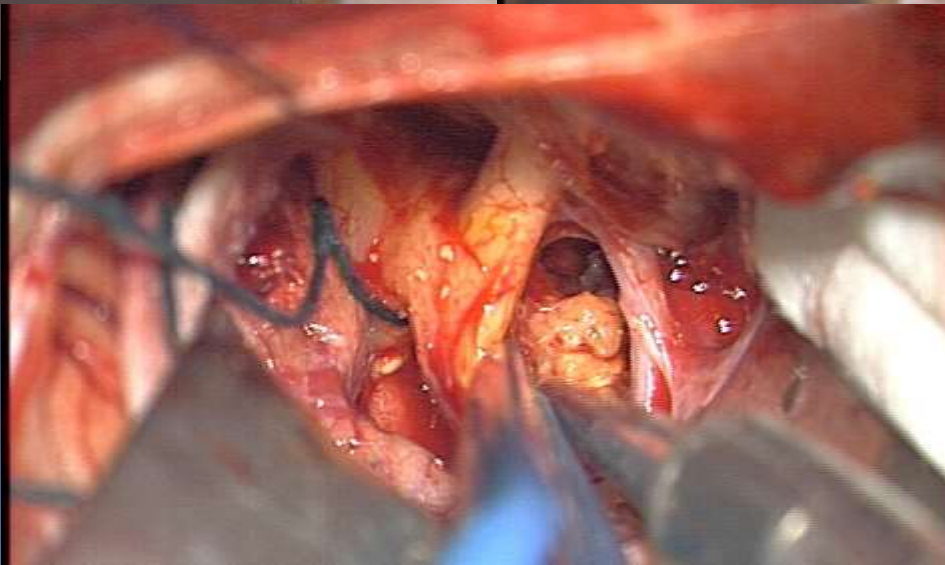
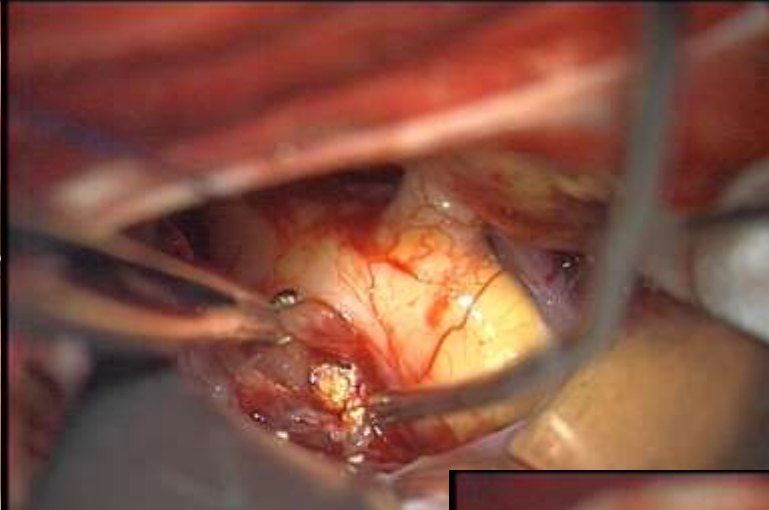
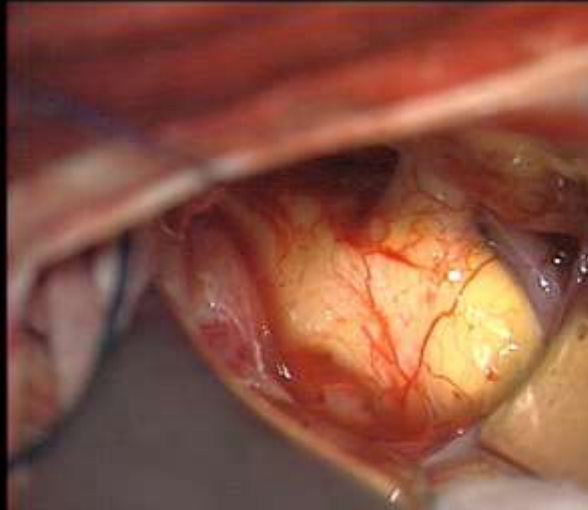
# Case 3 first step Fenestration



Filtro flessibile

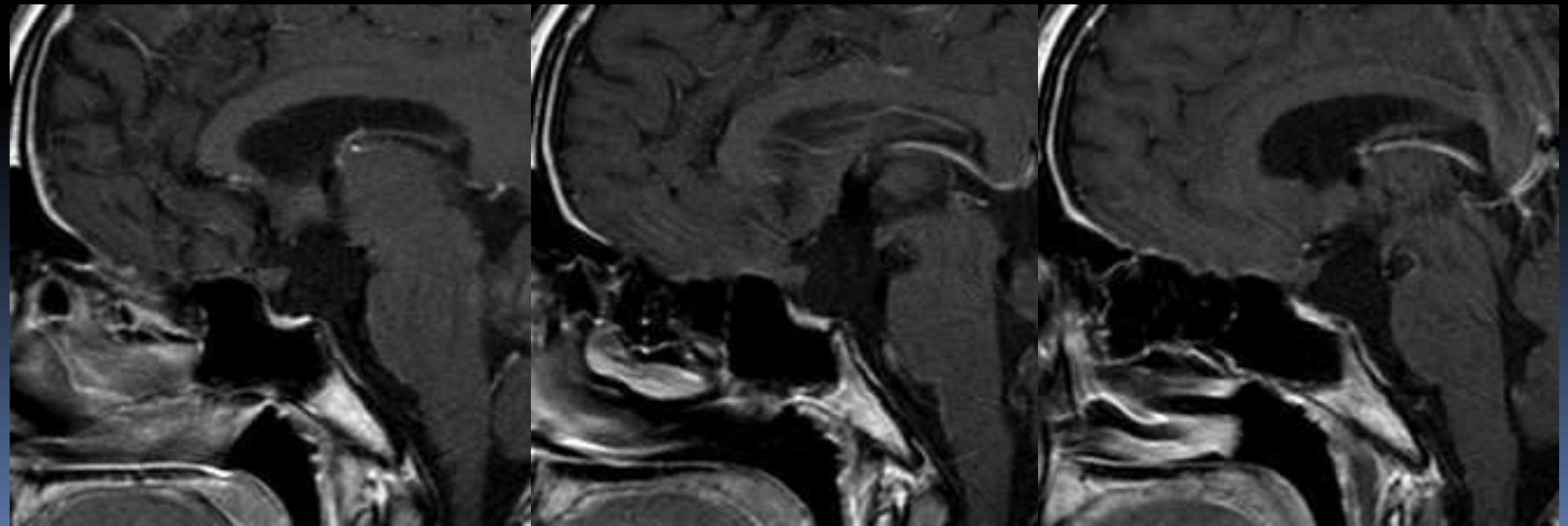
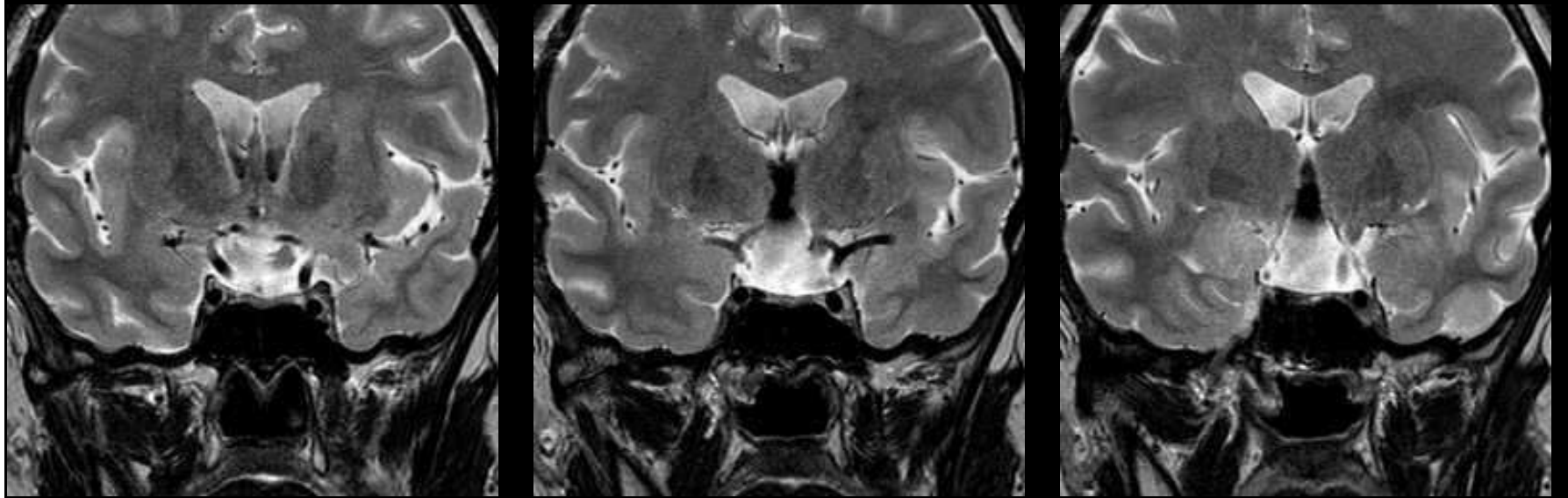
# Case 3 second step

Pterional approach translamina terminalis





# Case 3 Postop NMRi



# Case 5 Cyst Removal by Tm Laser preoperative

IFO Roma Corrente RM ENCEFALO SENZA E CON MDC

Ang

BP:  
ST: 2  
sp: 2

6

A



IFO Roma  
Angelini, I

BP:  
ST: 2.5  
sp: 2.8

6

R



Loss

Zoom: 1.0  
NEX: 2.0  
FOV: 180.0x180.0mm



F

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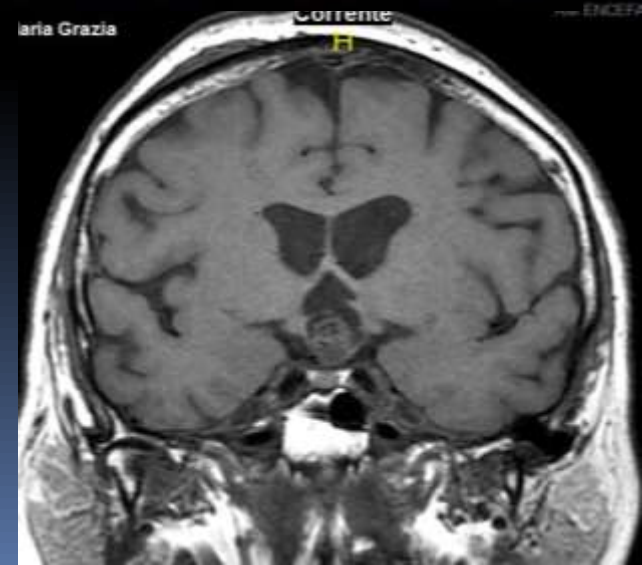
# Case 5 Cyst Removal by Tm Laser



# Case 5 Cyst Removal by Tm Laser postoperative

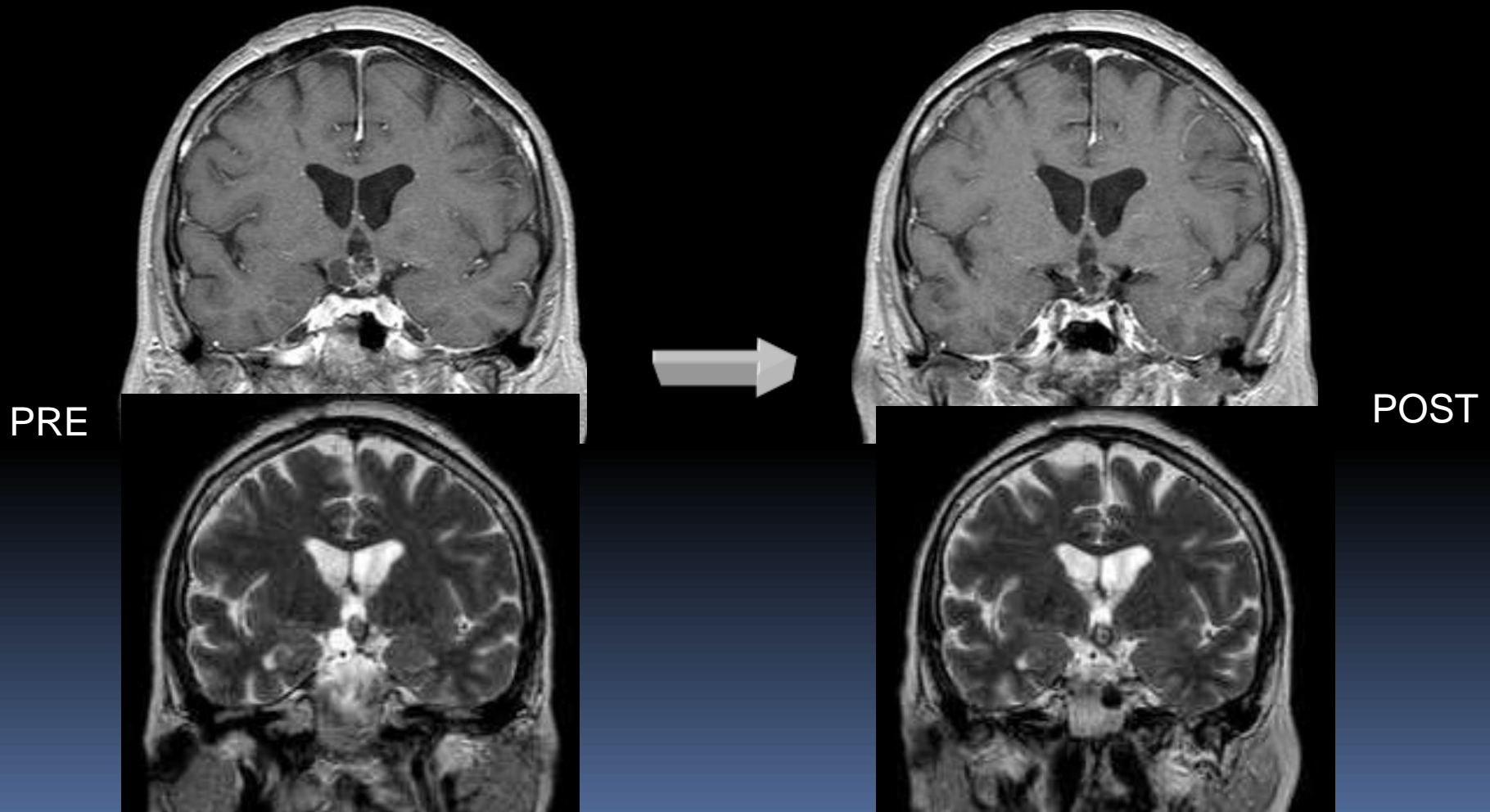


Postop 3 mth



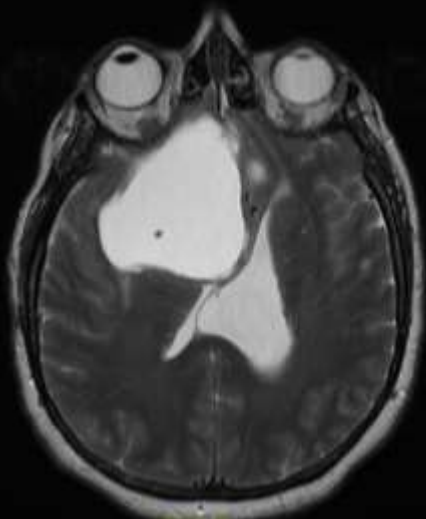


# Case 5 After 1 yr postendoscopy Radiosurgery

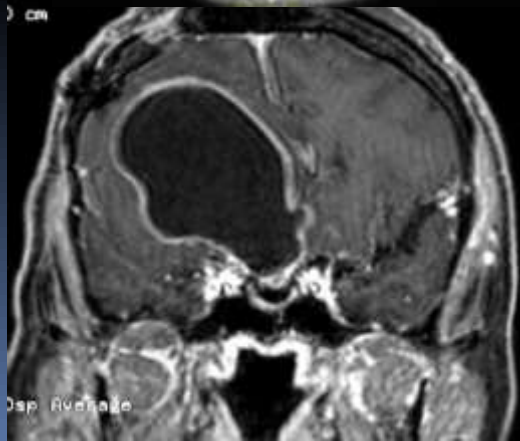
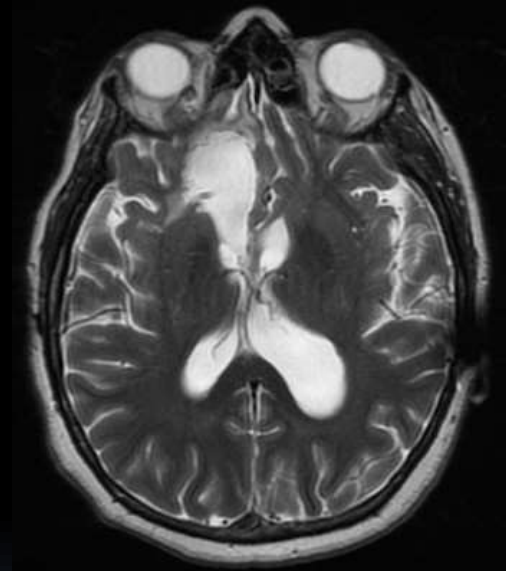


# Case 6 postsurgical recurrence Septostomy, Fenestration, Ommaya

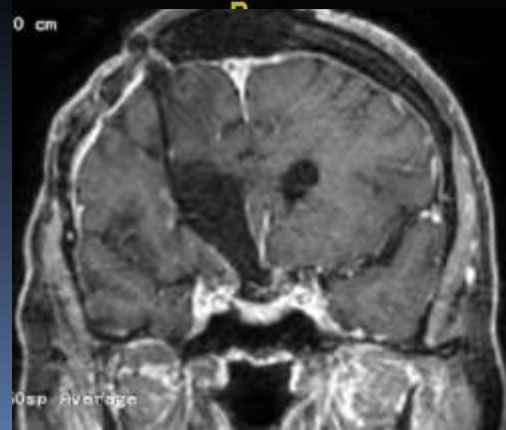
PRE ENDOSCOPY



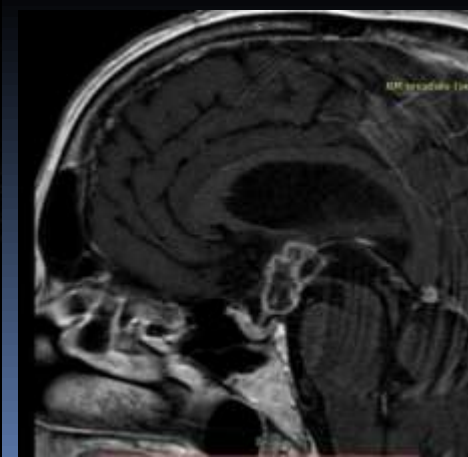
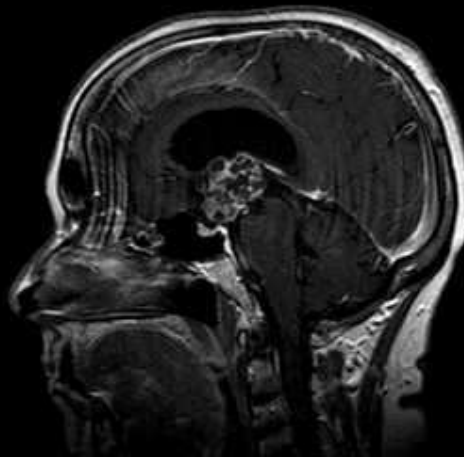
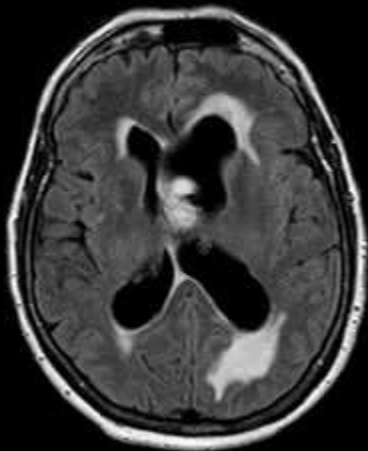
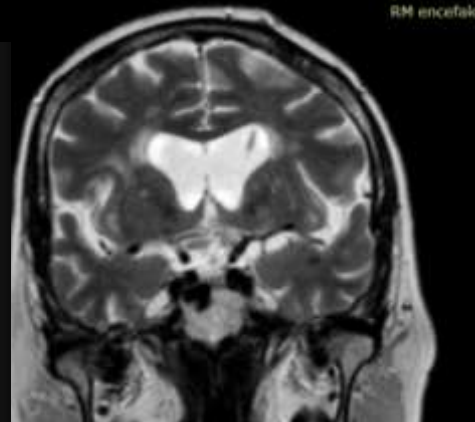
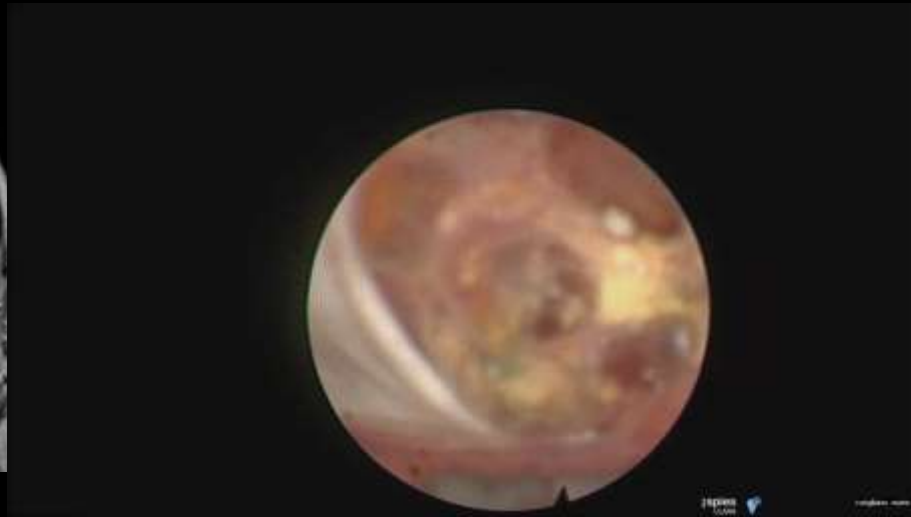
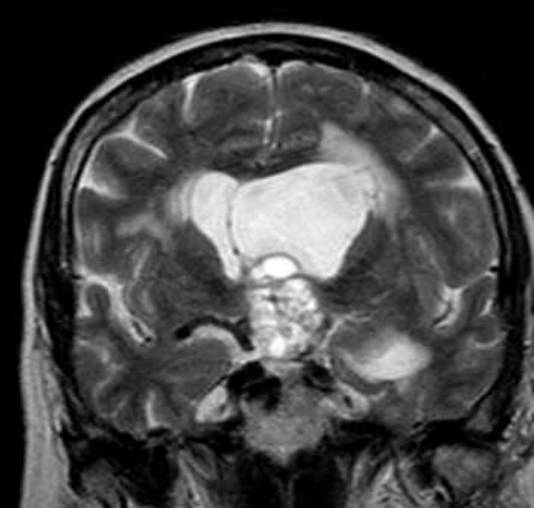
POST ENDOSCOPY 2 yr



CRANIOPHARYNGIOMA



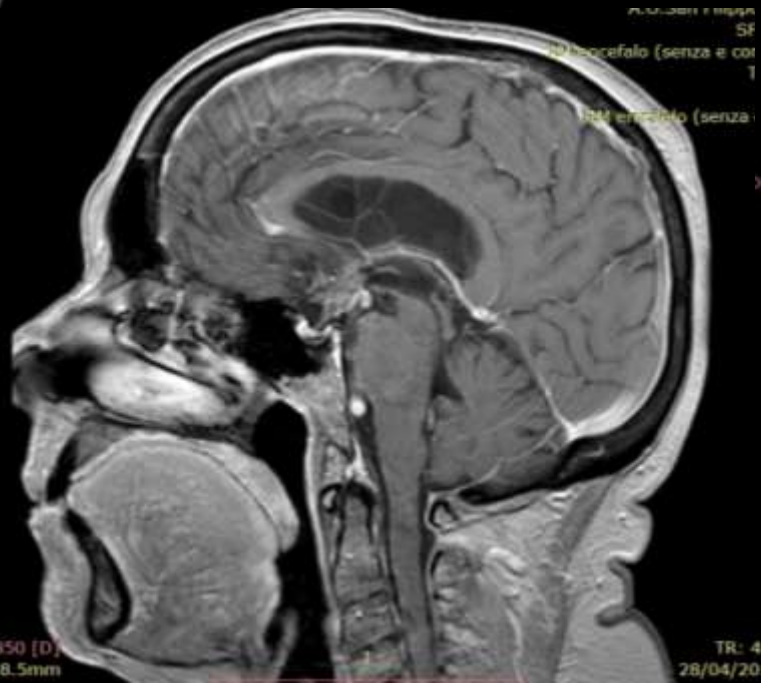
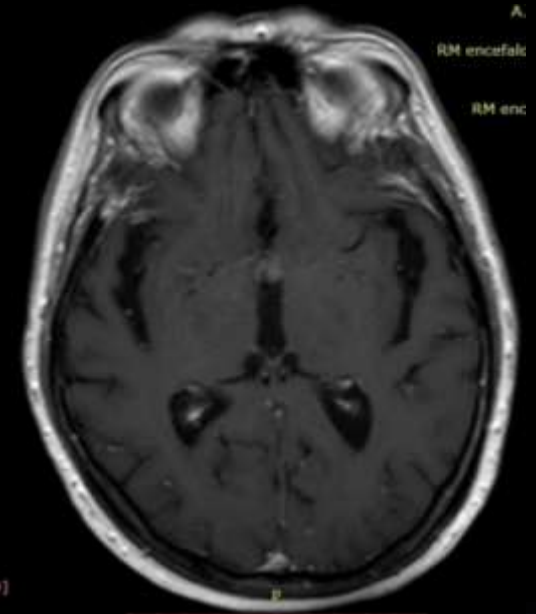
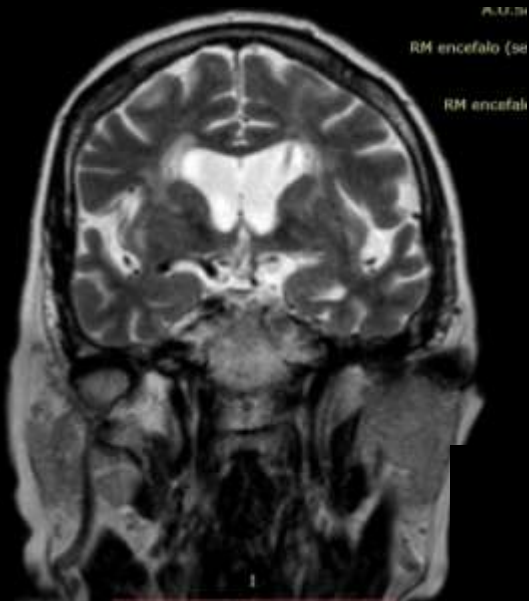
# Case 7 Tumor Resection by Tm Laser



Preop RMN

Postop RMN

# Case 7 After 6 mth Radiosurgery





# Clinical Results

## Neuroendoscopy and Adjuvant Therapy

Case	Age	Complicances	Obstructive Hydrocephalus	Clinical Outcome	Follow-up Yrs	Solid volum tumor
1	35	No	Relief	Good QoL	10	Stable
2	58	No	Relief	Good QoL	10	Stable
3	17	No	Relief	Good QoL	3	Stable
4	48	No	Relief	Good QoL	4	Stable
5	75	No	Relief	Good QoL	3	Stable
6	57	No	Relief	Good QoL	3	Stable
7	69	No	Relief	Good QoL	2	Stable

# Conclusion

In our experience, ventricular neuroendoscopy is a minimal invasive approach with poor morbidity. It can be a surgical alternative in selected cases: 3<sup>rd</sup> ventricle cystic craniopharyngiomas with hydrocephalus, specially after postsurgical recurrence. In case of newly diagnosed ventricular tumors CSF pathways relief and histological diagnosis by neuroendoscopy can be obtained. After resolving intracranial hypertension, microsurgery or adjuvant therapy can be choose as subsequent treatment