

T1WI颅内高信号病变

荆利娜



引起T1高信号的成分及相关疾病

◆高（正）铁血红蛋白

- 脑内血肿（如高血压、脑淀粉样血管病）
- 出血性梗死
- 弥漫性轴索损伤
- 硬膜下/外血肿
- 蛛网膜下腔出血
- 脑室内出血
- 动脉、静脉血栓
- 血管畸形（如动静脉畸形）
- 肿瘤内出血



引起T1高信号的成分及相关疾病

◆ 黑色素

- 原发性或转移性黑色素瘤
- 弥漫性脑膜黑色素瘤病
- 神经皮肤黑色素沉着症

◆ 蛋白成分

- 胶样囊肿
- 拉克氏囊肿
- 异位神经垂体

◆ 脂肪

- 脂肪瘤
- 畸胎瘤
- 皮样囊肿



引起T1高信号的成分及相关疾病

◆矿物质：钙、锰、铜、铁 ◆其他

- 甲旁减、假性甲旁减
- Fahr 病
- 肿瘤钙化
- 肝性脑病
- 肝豆状核变性

- 颅咽管瘤
- 神经纤维瘤病I型
- 皮层层状坏死
- 非酮症性高血糖症
- 缺氧缺血性脑病
- 脊索瘤



根据发病位置对T1高信号病变进行分类

◆深部灰质核团

- 高血压脑出血：单侧或双侧壳核、外囊、丘脑
- 肝性脑病：双侧苍白球和黑质
- 甲旁减、假性甲旁减、假性假甲旁减、Fahr病：双侧基底节、丘脑、齿状核、半卵圆中心
- 肝豆状核变性：双侧基底节和丘脑

◆大脑半球

- 肿瘤内出血、脑淀粉样血管病、血管畸形、脑挫裂伤、出血性梗死、皮层层状坏死



◆ 中线结构

- 脂肪瘤、皮样囊肿、畸胎瘤、深部静脉血栓

◆ 鞍区、鞍旁

- 颅咽管瘤、拉克氏囊肿、皮样囊肿、畸胎瘤、异位神经垂体、动脉瘤血栓形成

◆ 脑室内

- 脑室内出血、胶样囊肿、皮样囊肿破裂

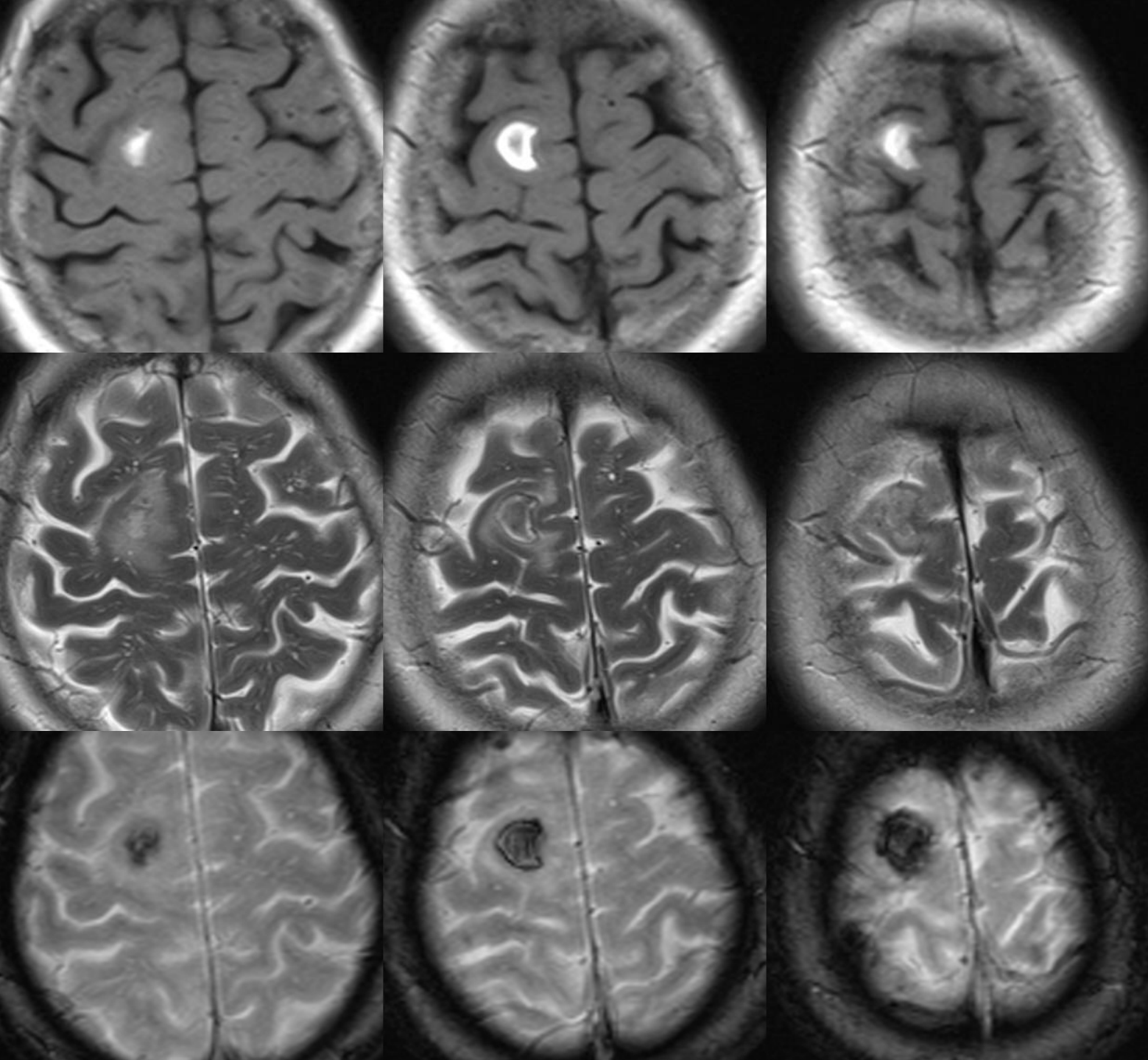
◆ 硬膜

- 转移瘤出血、黑色素瘤、静脉窦血栓形成



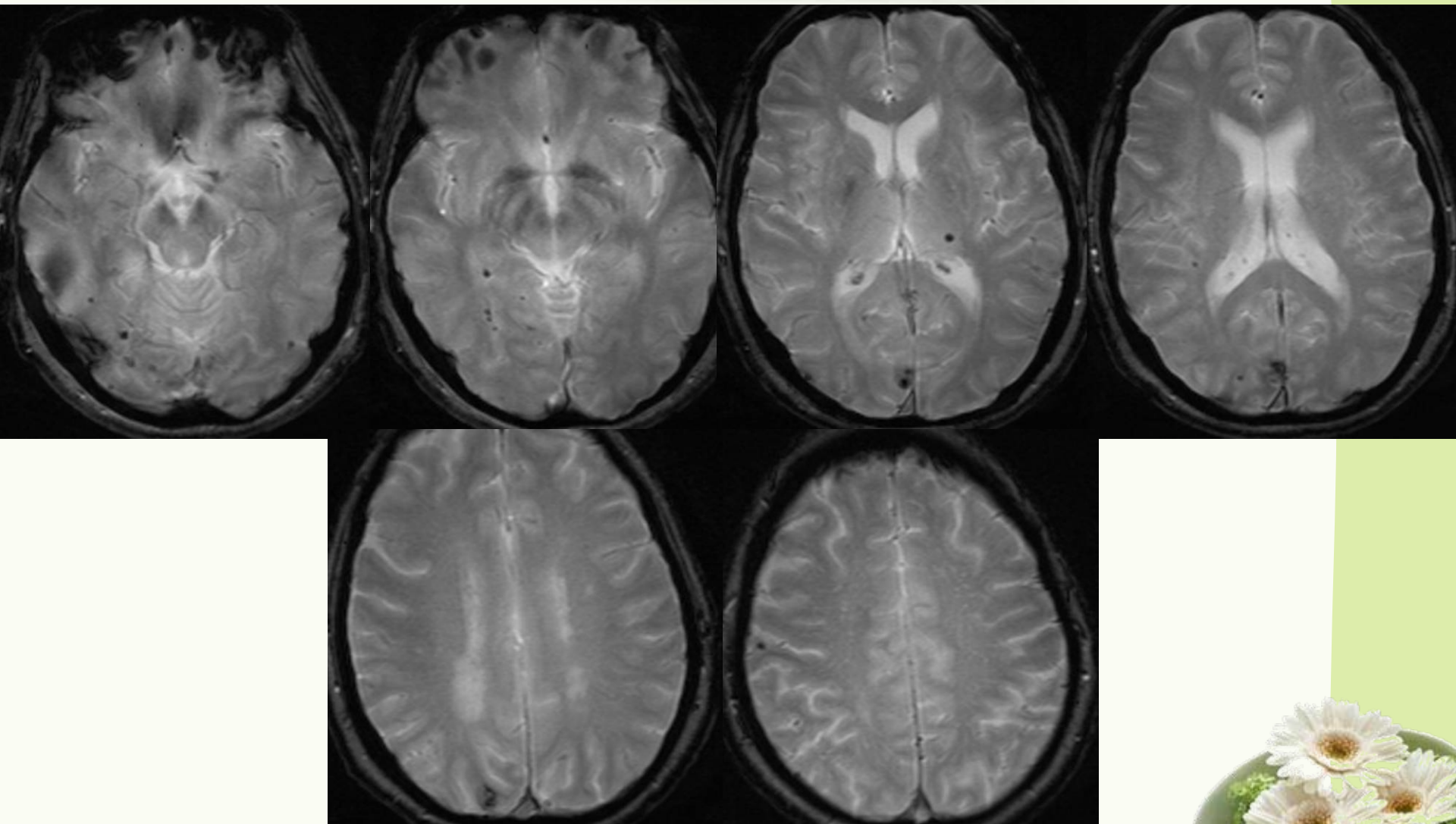
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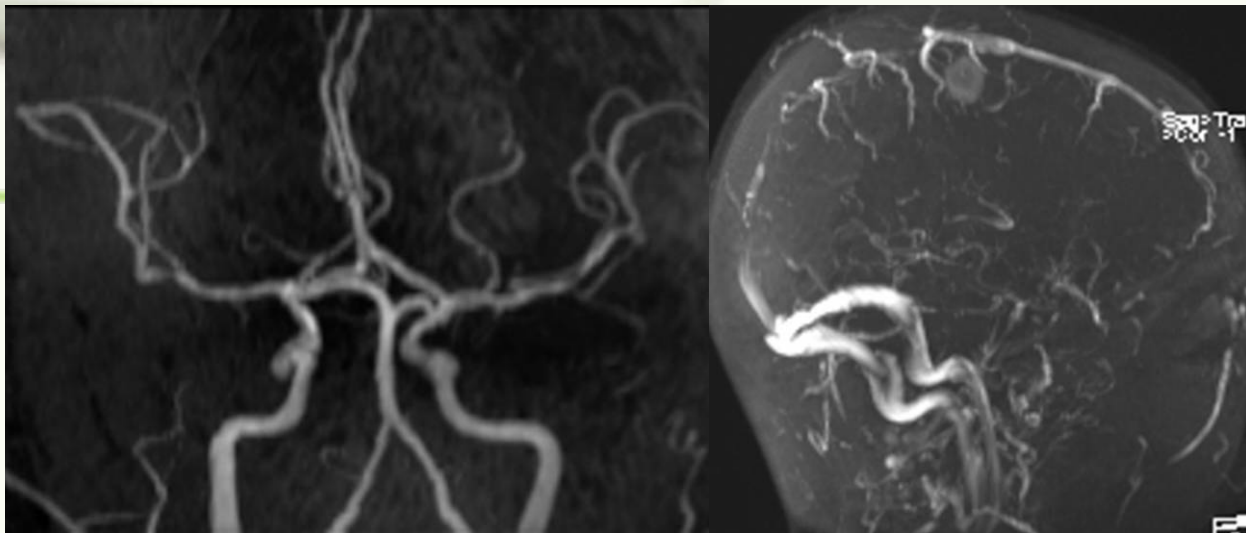




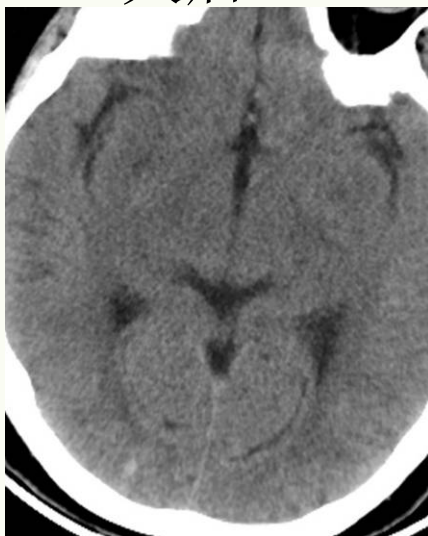
F
64Y



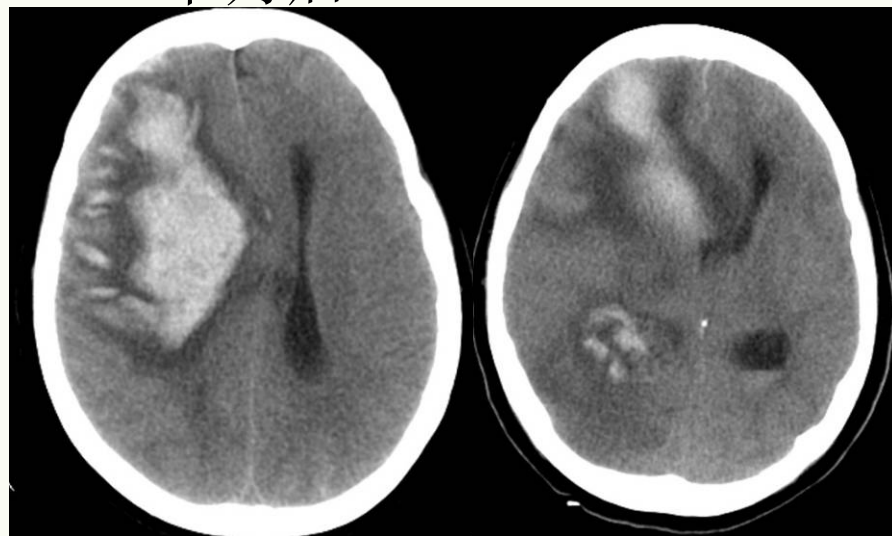




6天后CT



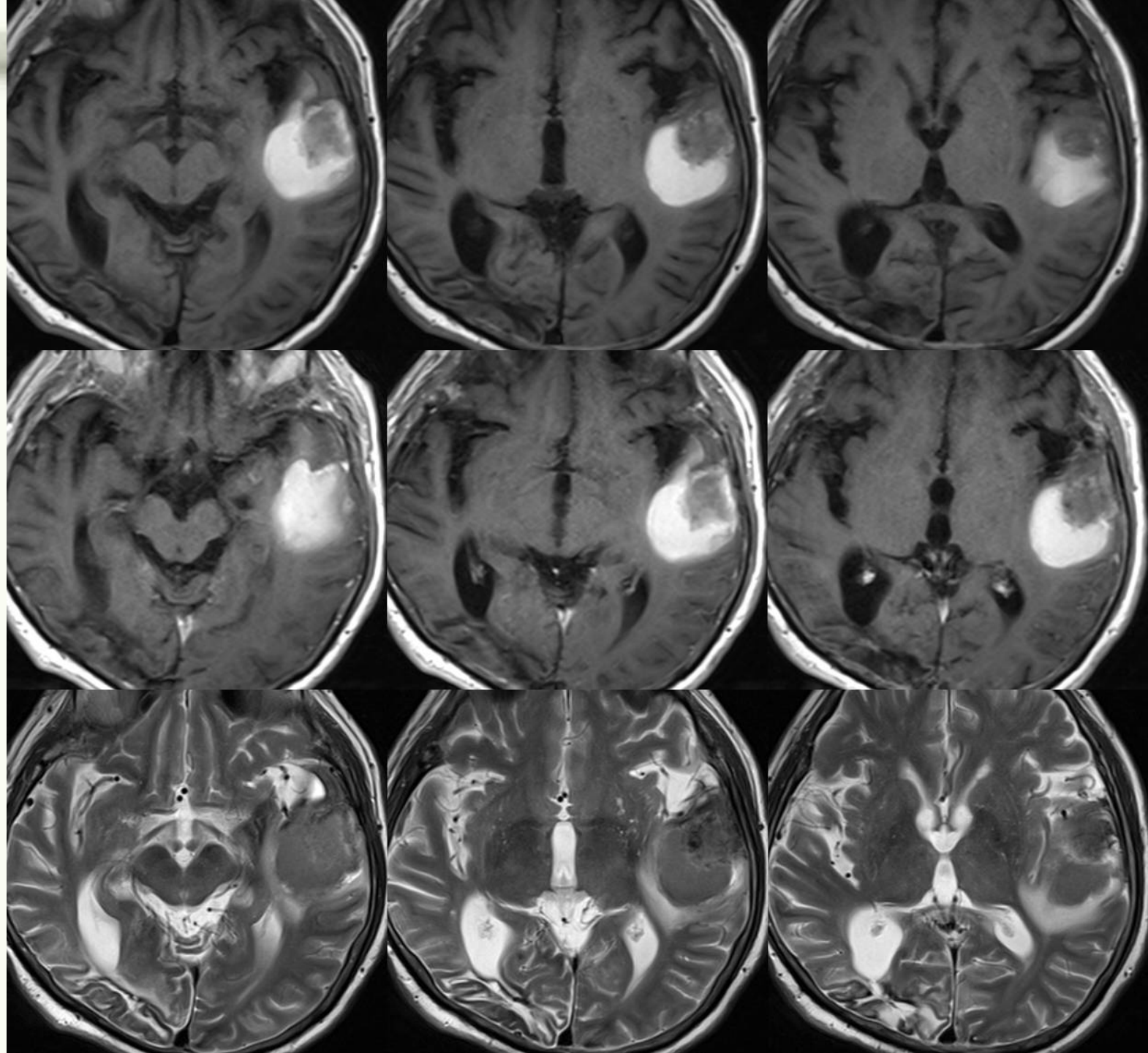
18个月后CT



脑淀粉样血管病

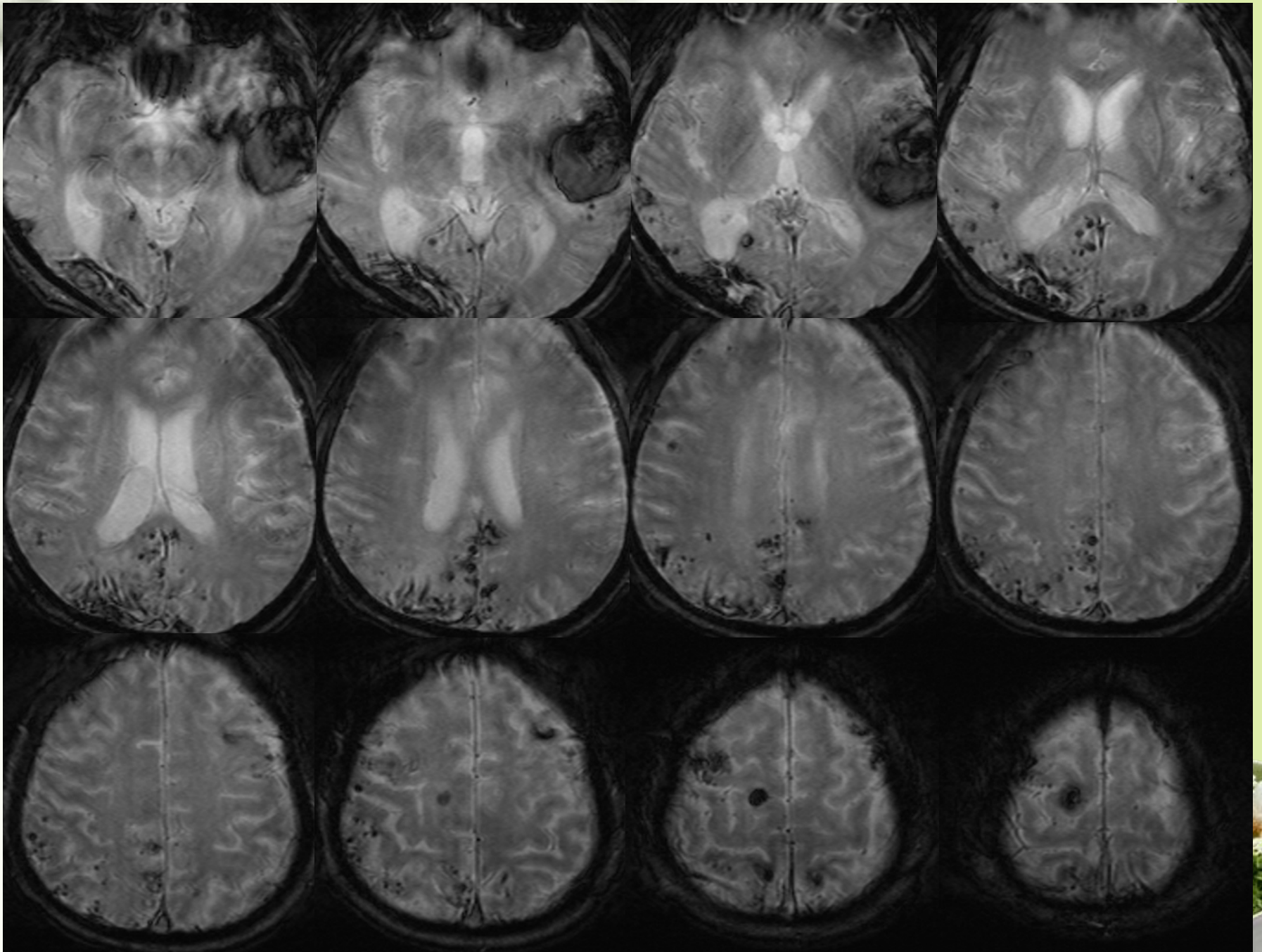
- ◆ 年龄偏大（ ≥ 55 岁Boston诊断标准），血压正常
- ◆ 皮质、皮层下和柔脑膜中小动脉壁内的 β -淀粉样蛋白沉积
- ◆ 自发性皮层/皮层下出血，占老年人脑内出血的38%–74%
- ◆ 反复和/或多发脑内出血，也可有蛛网膜下腔出血或硬膜下血肿（继发或原发）

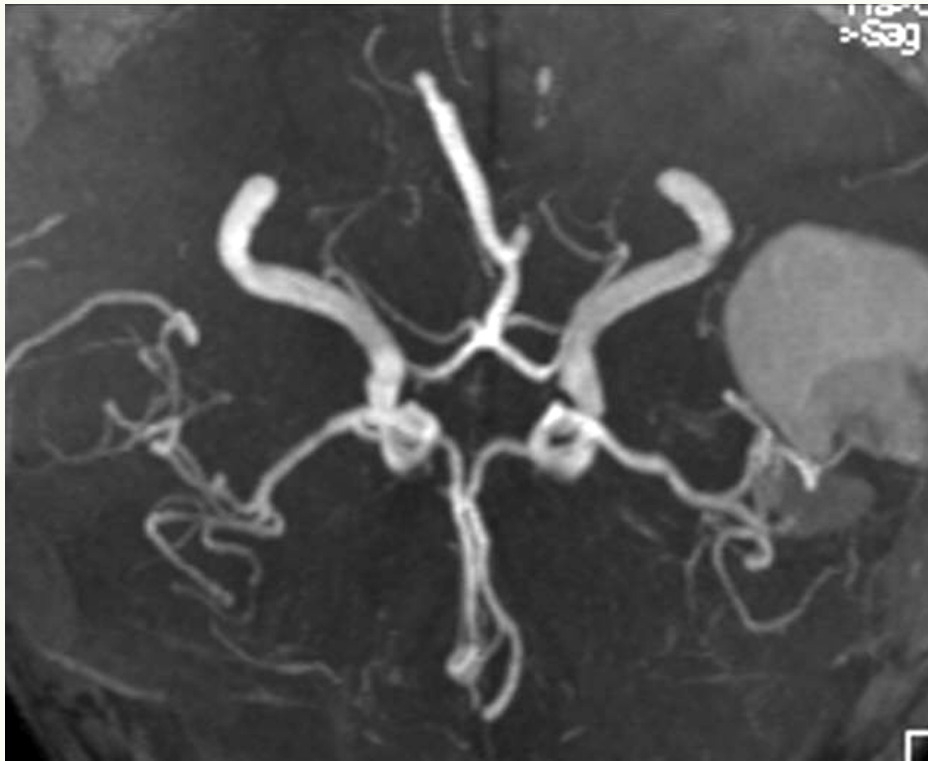


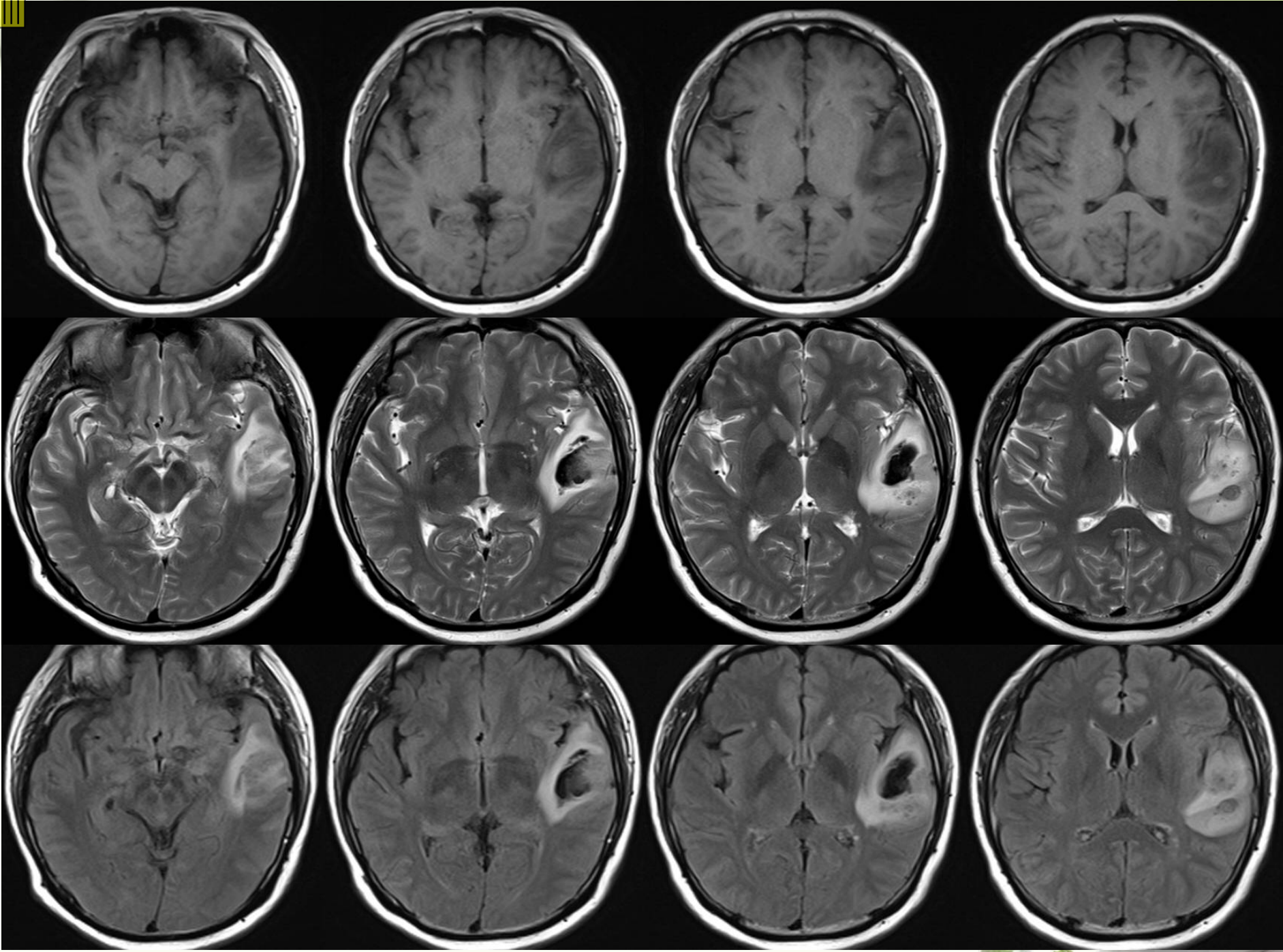


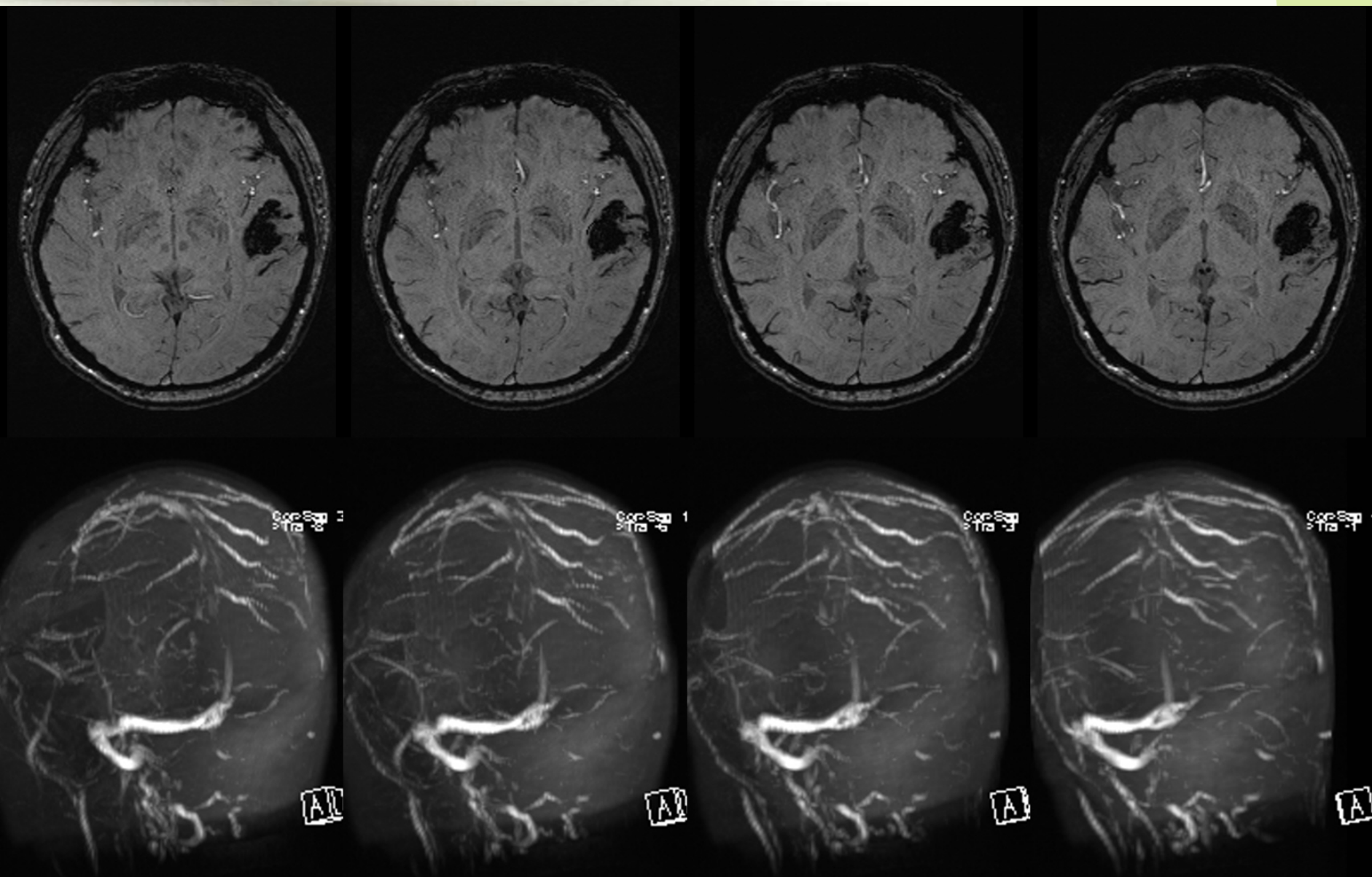
M
78Y

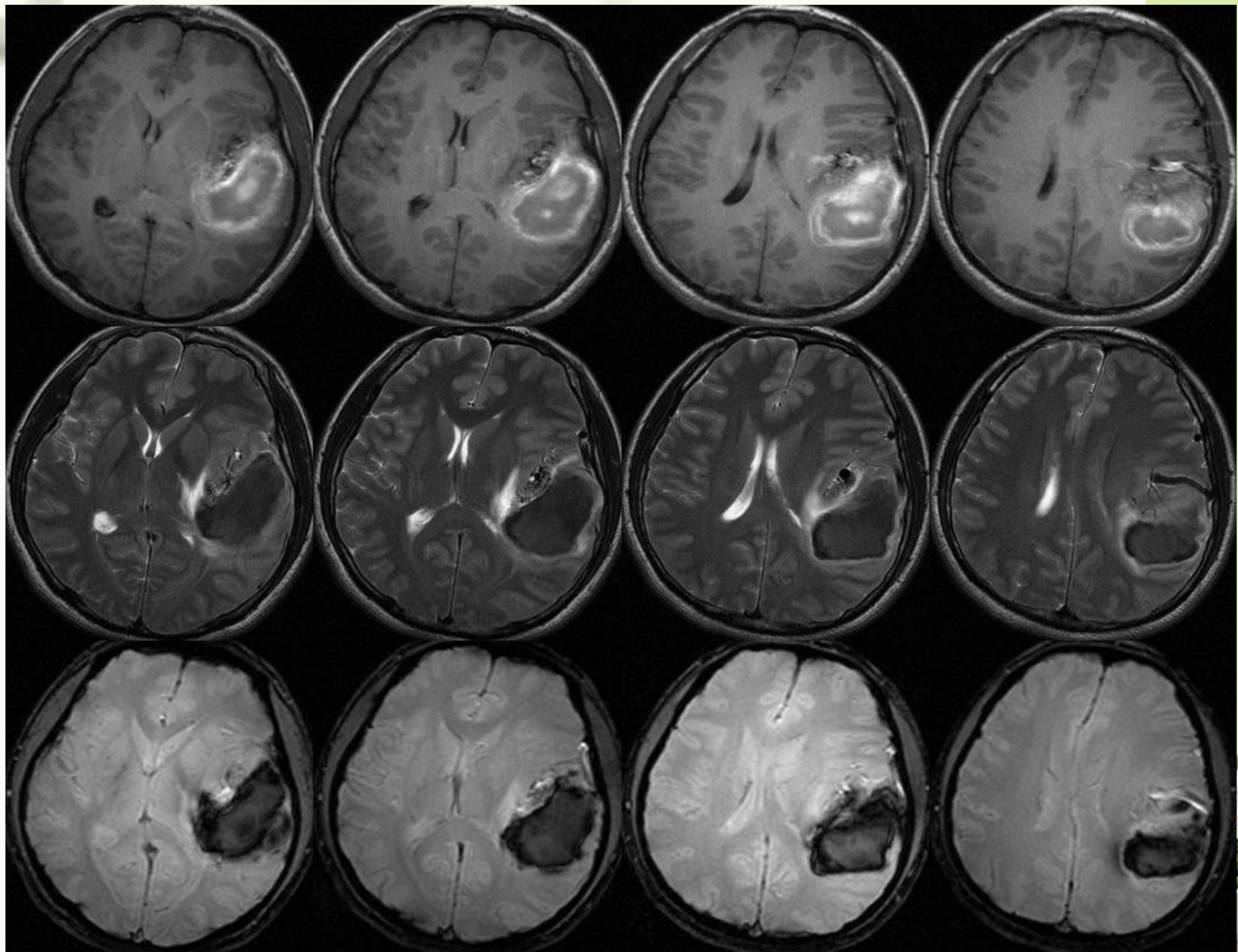


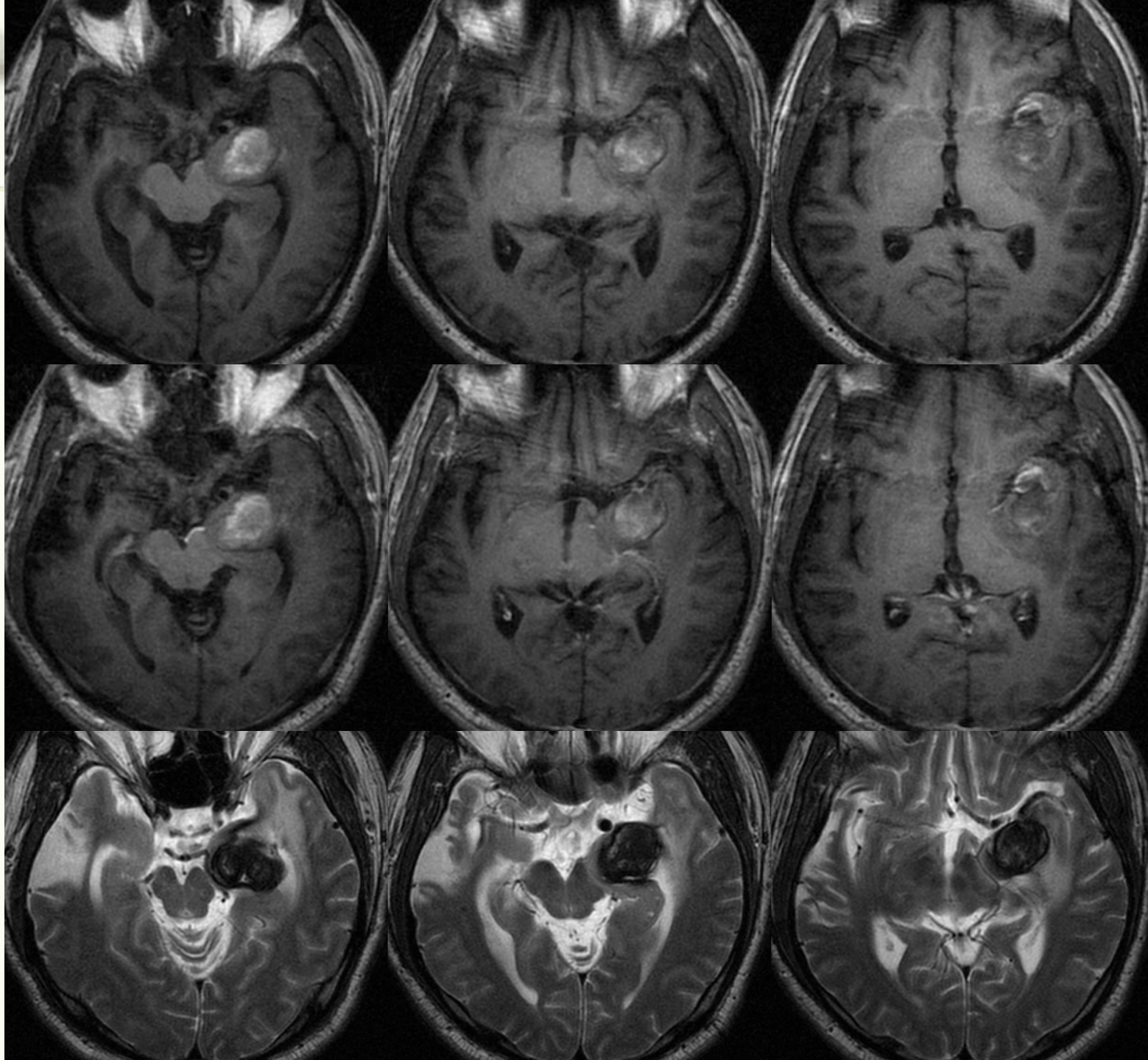






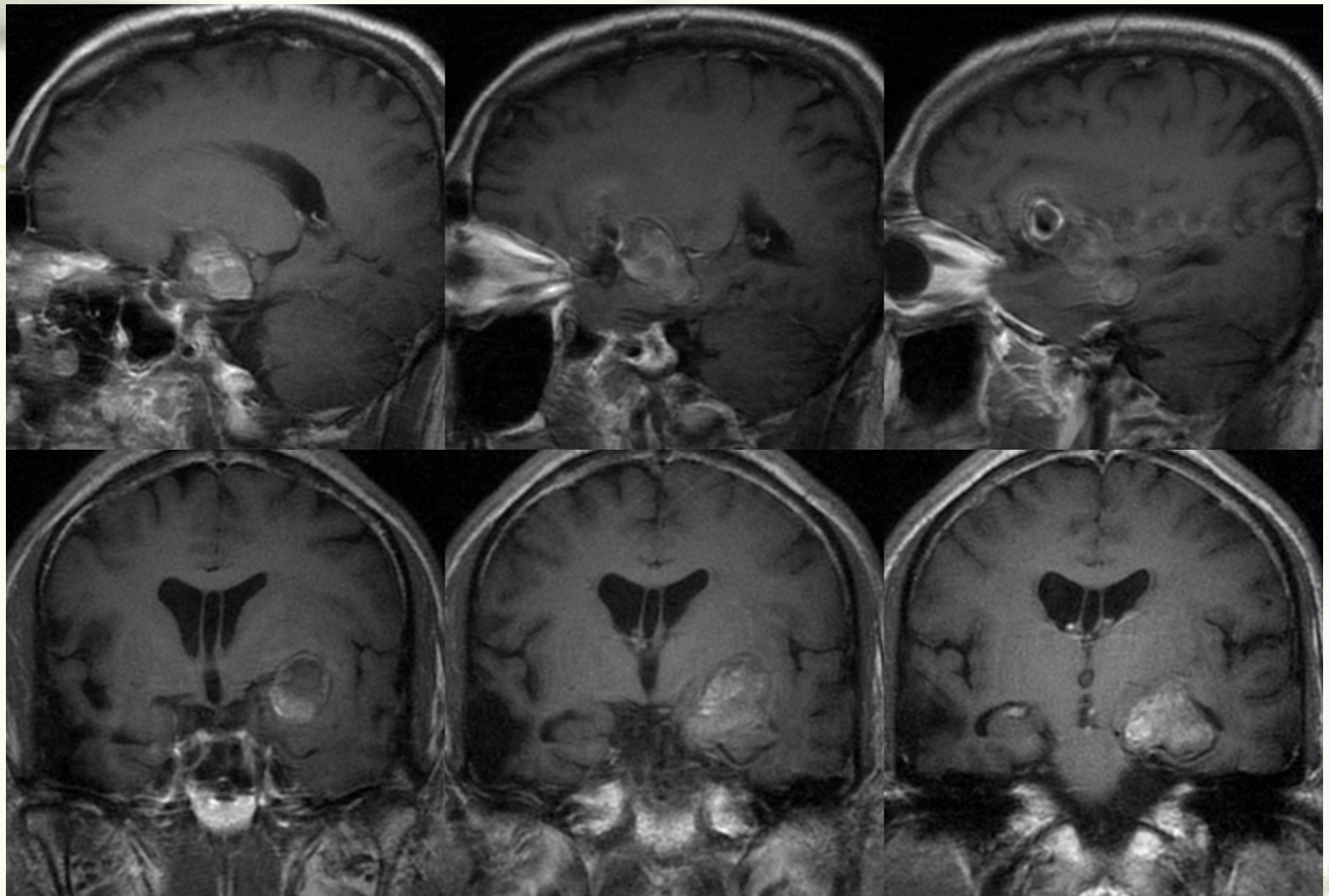


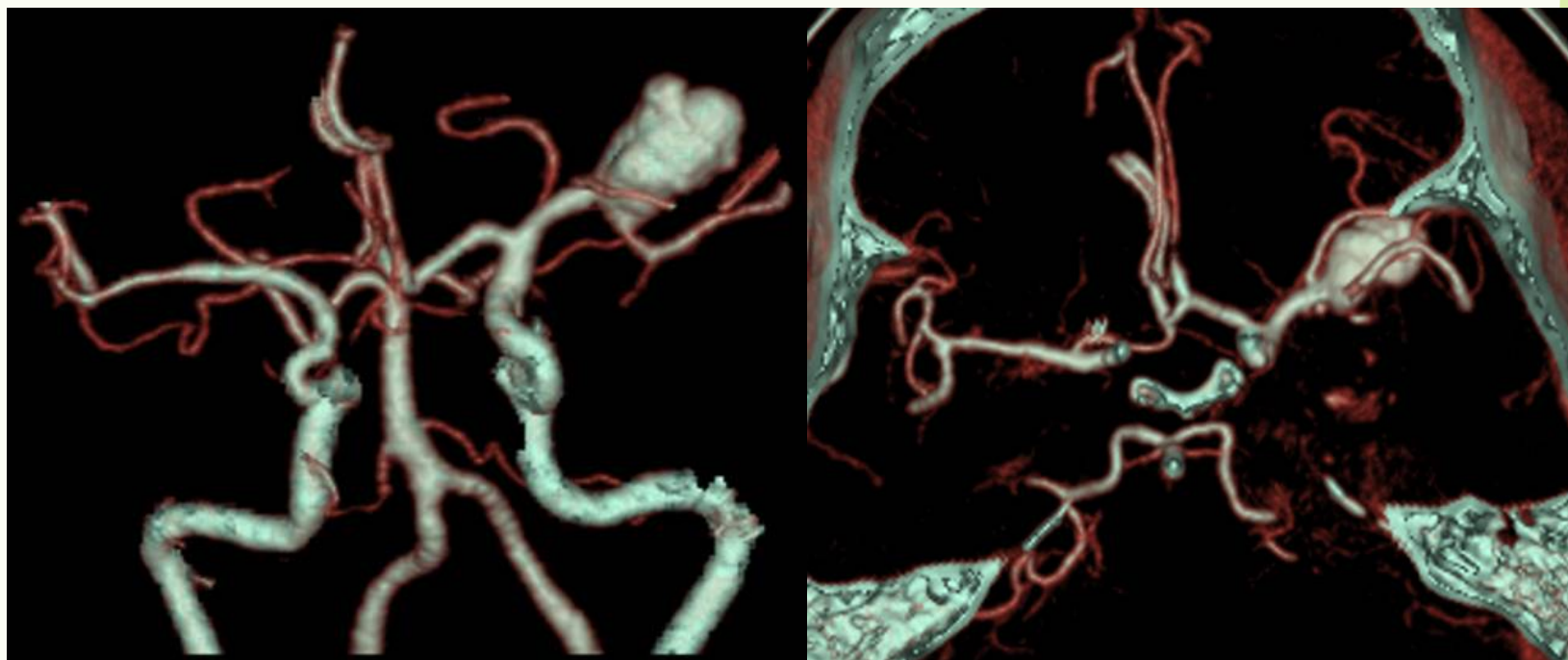


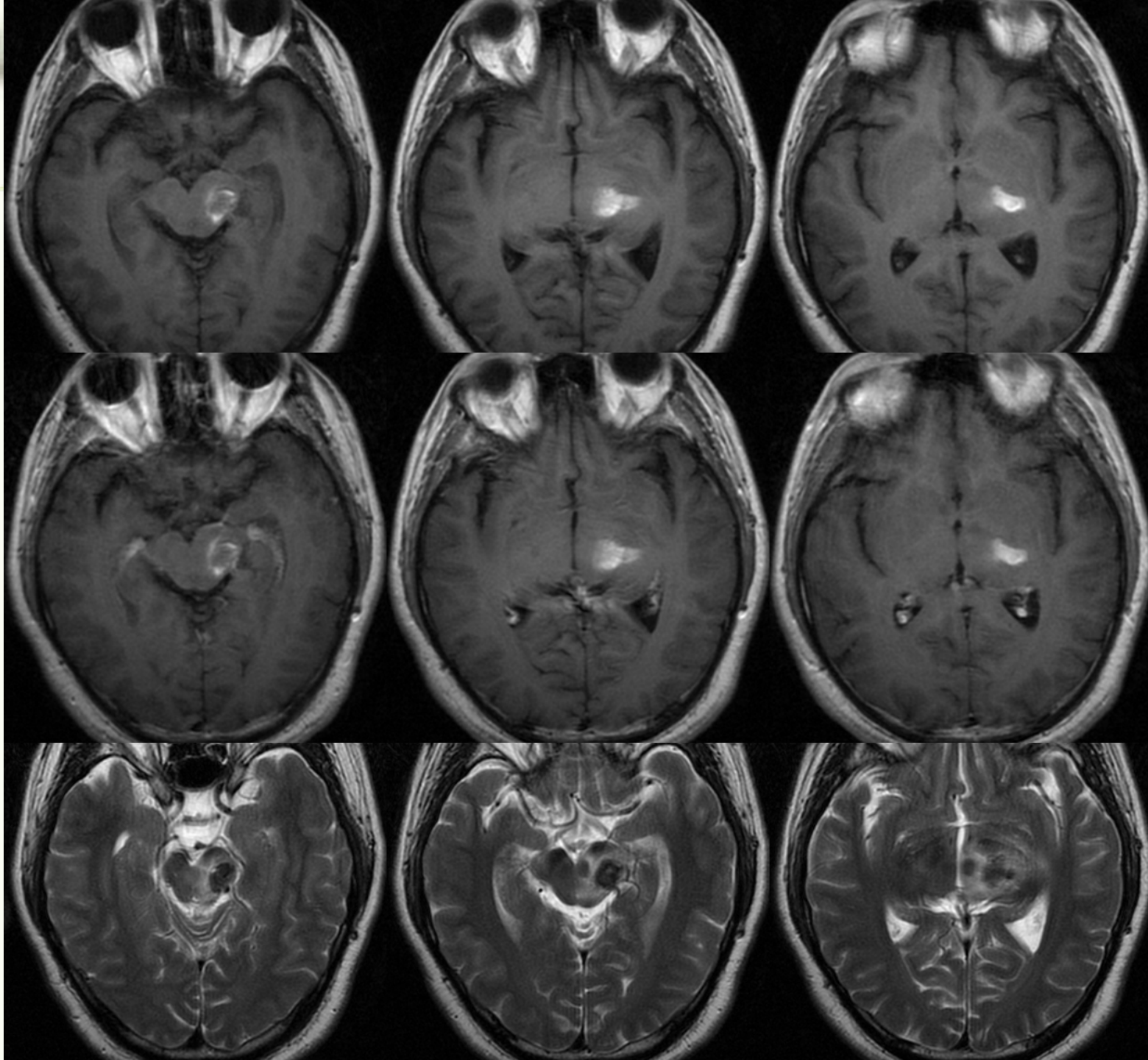


M
49Y



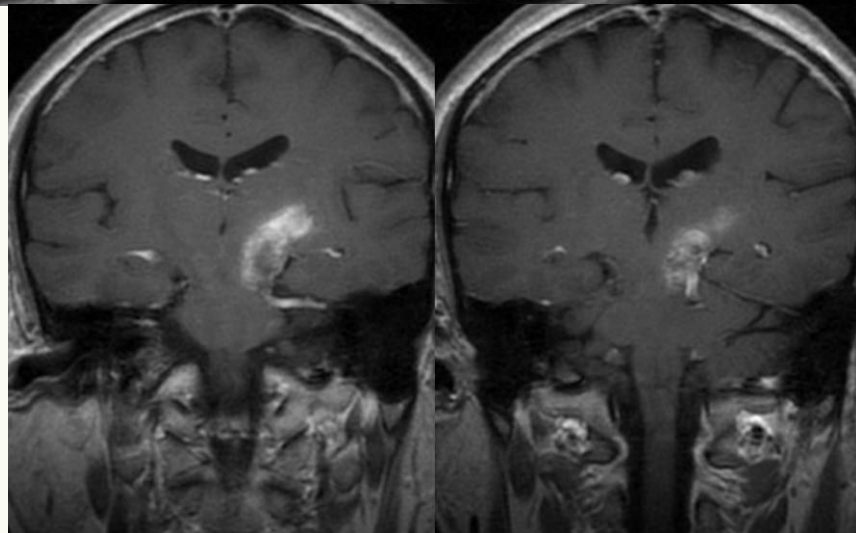






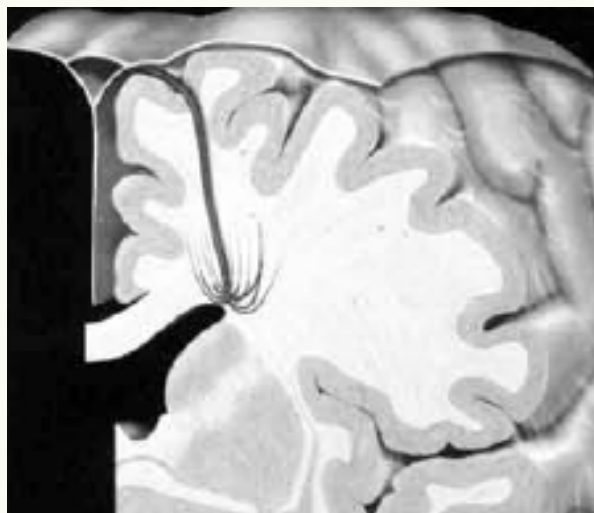
M
39Y

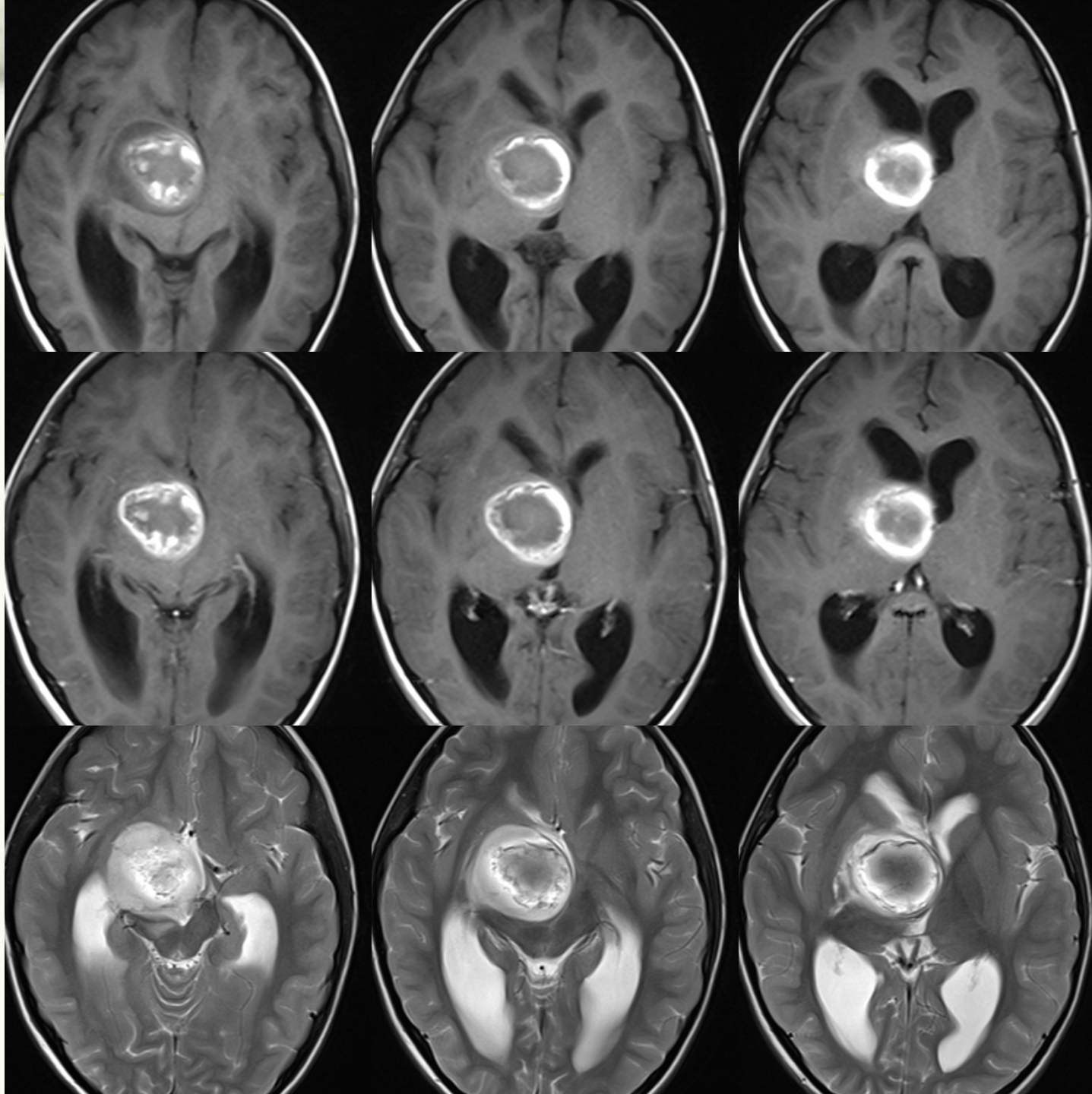




静脉畸形

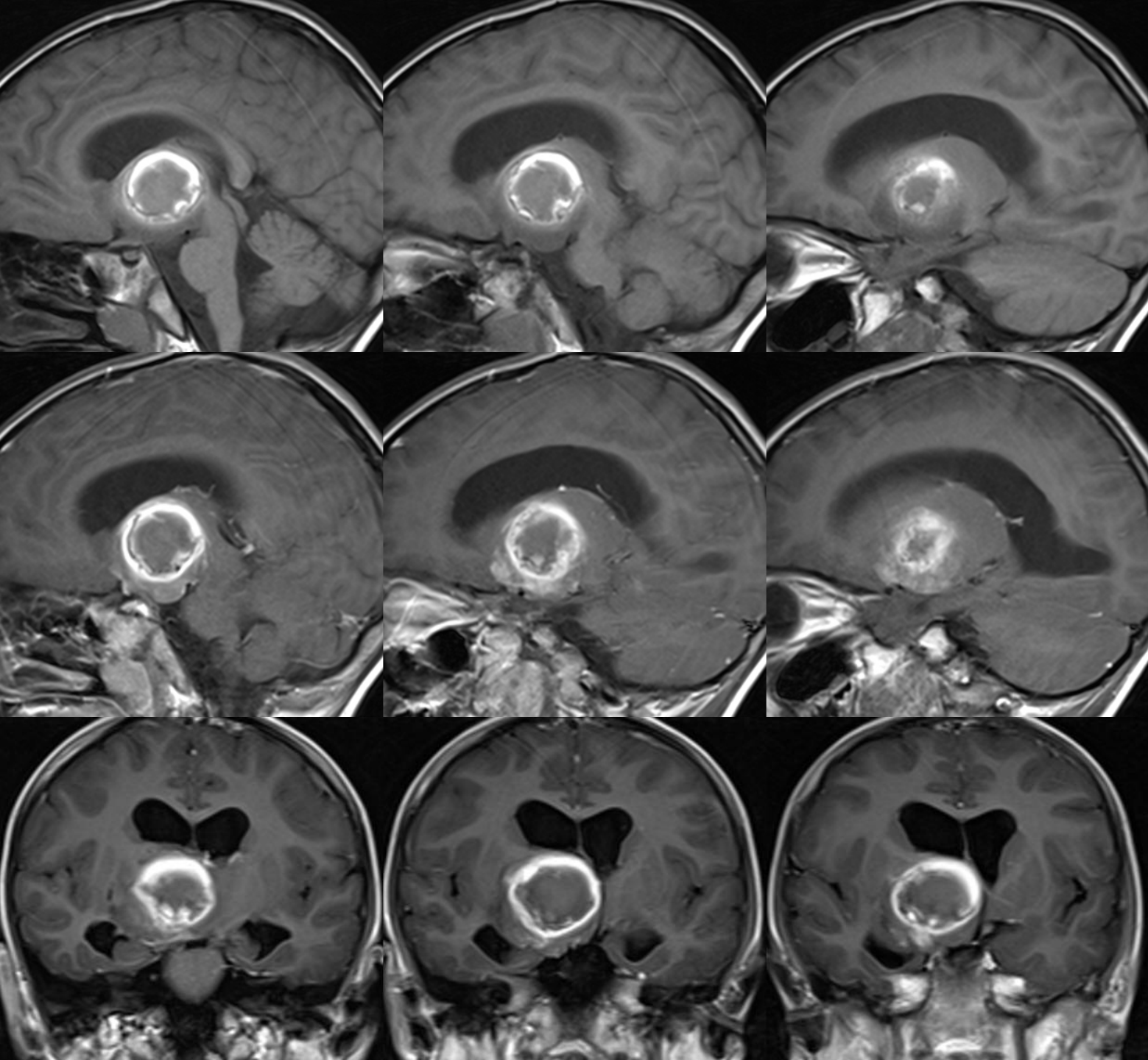
- ◆ 活检时最常见的脑血管畸形
- ◆ 多无症状，侧脑室前角旁是最常见位置
- ◆ MR平扫呈阴性，增强后呈伞状或水母头样强化
- ◆ 15%-20%合并海绵状血管瘤
- ◆ 合并海绵状血管瘤或引流静脉血栓形成时会出现出血。





M
5Y



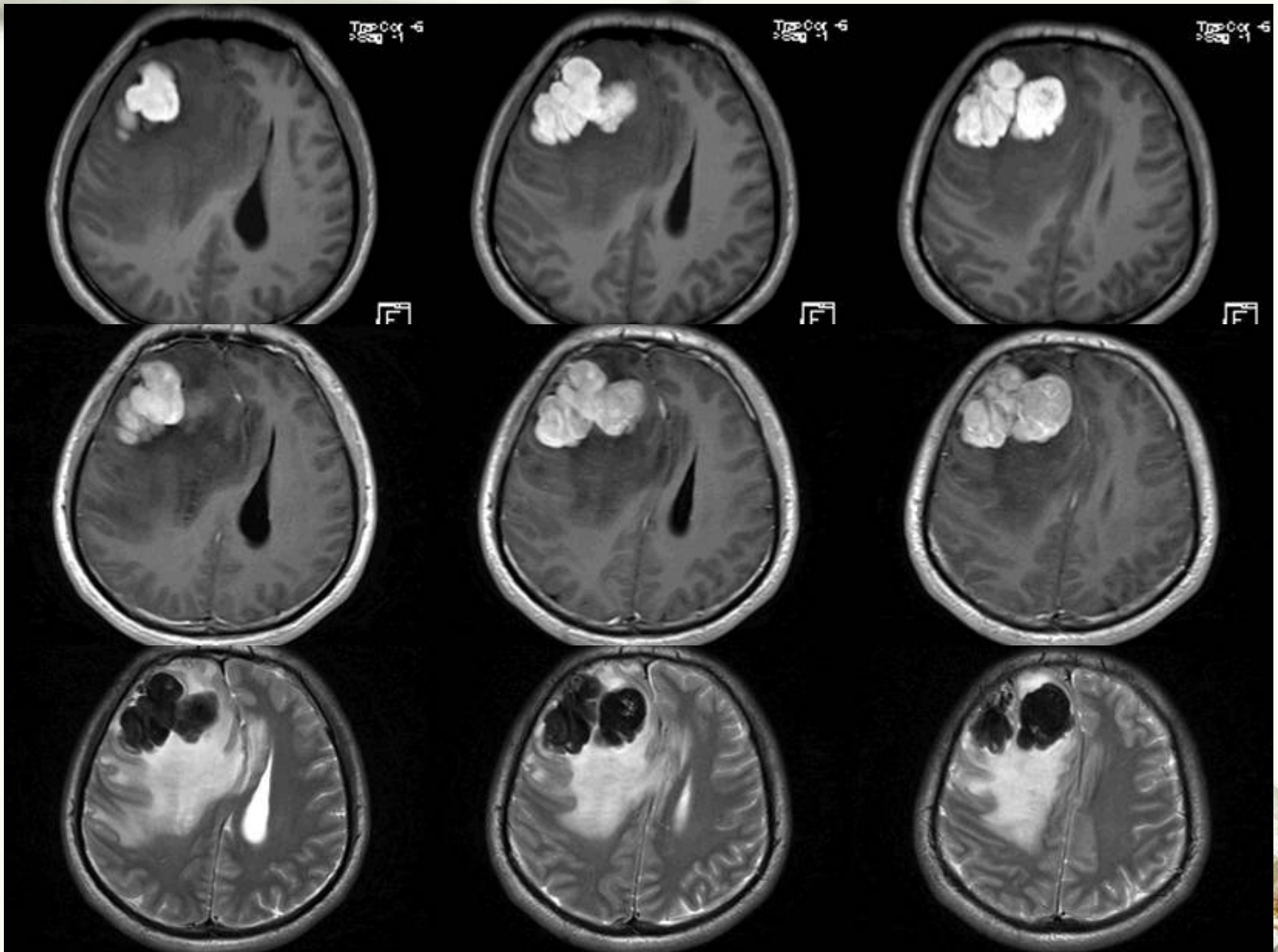


星形细胞瘤



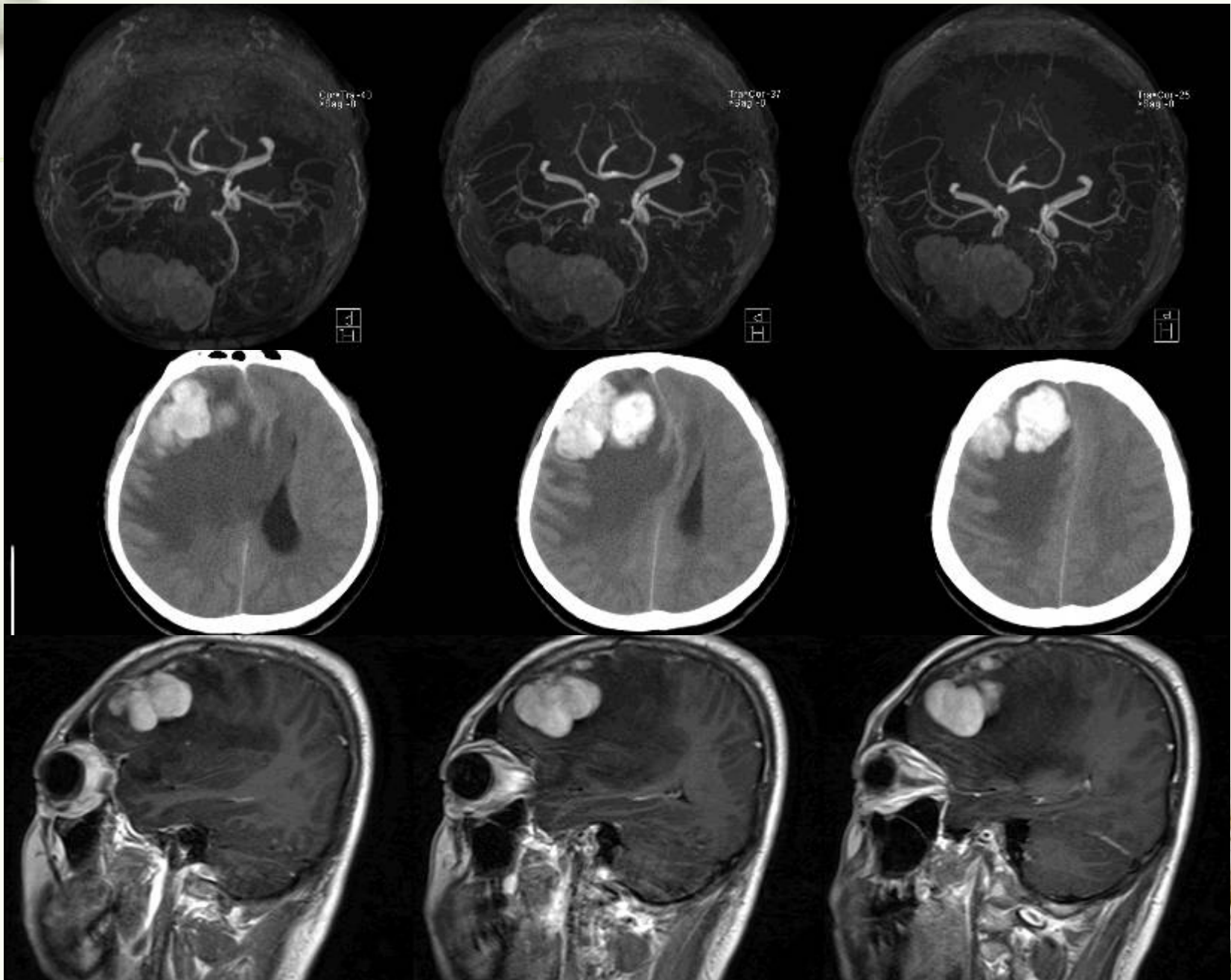
含黑色素成分





M
36Y





黑色素瘤

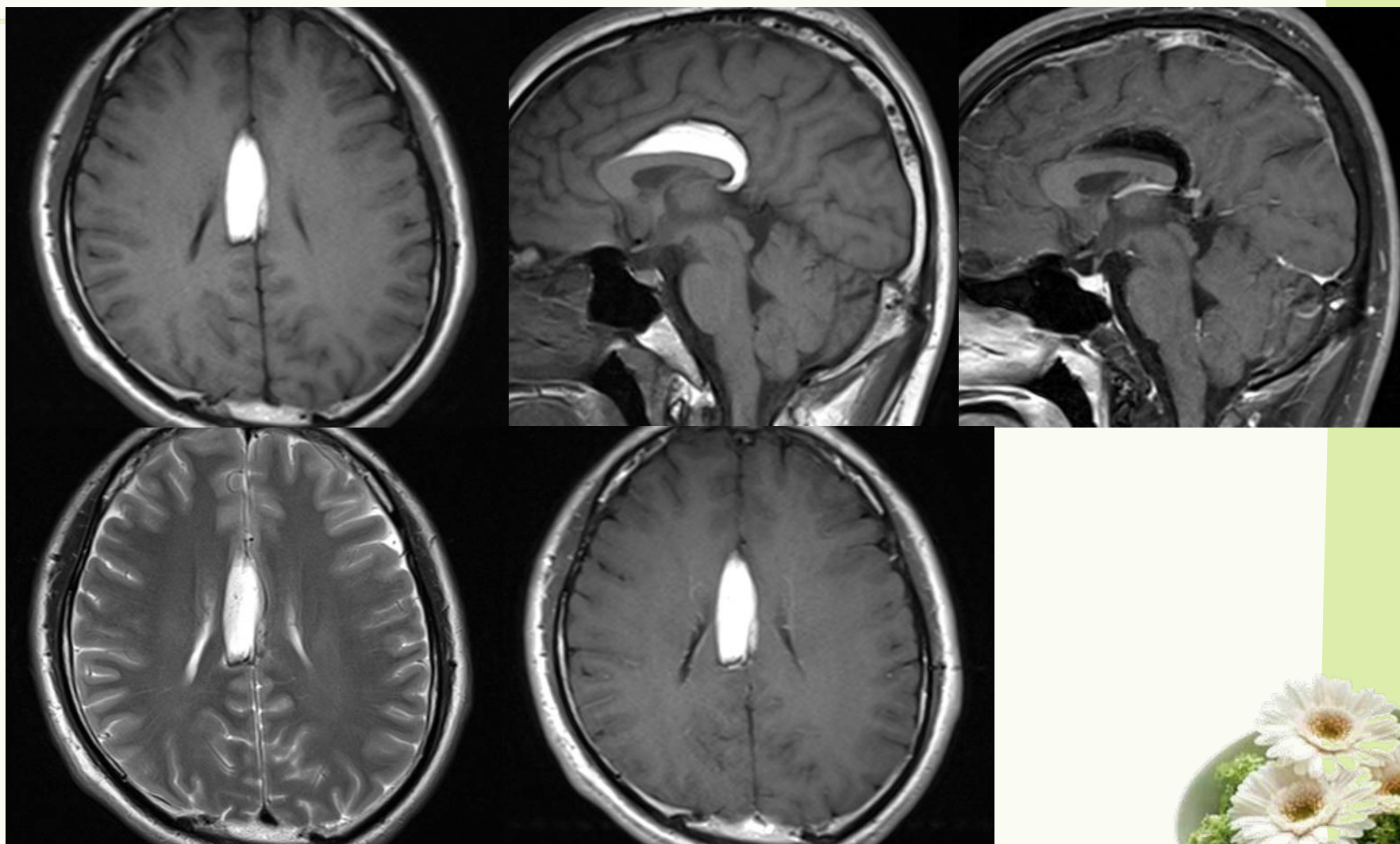
- ◆特征性表现T1WI高信号， T2WI低信号
- ◆根据成分不同呈现混杂信号
- ◆若肿瘤不含黑色素， 可表现T1WI等低信号， T2WI高信号

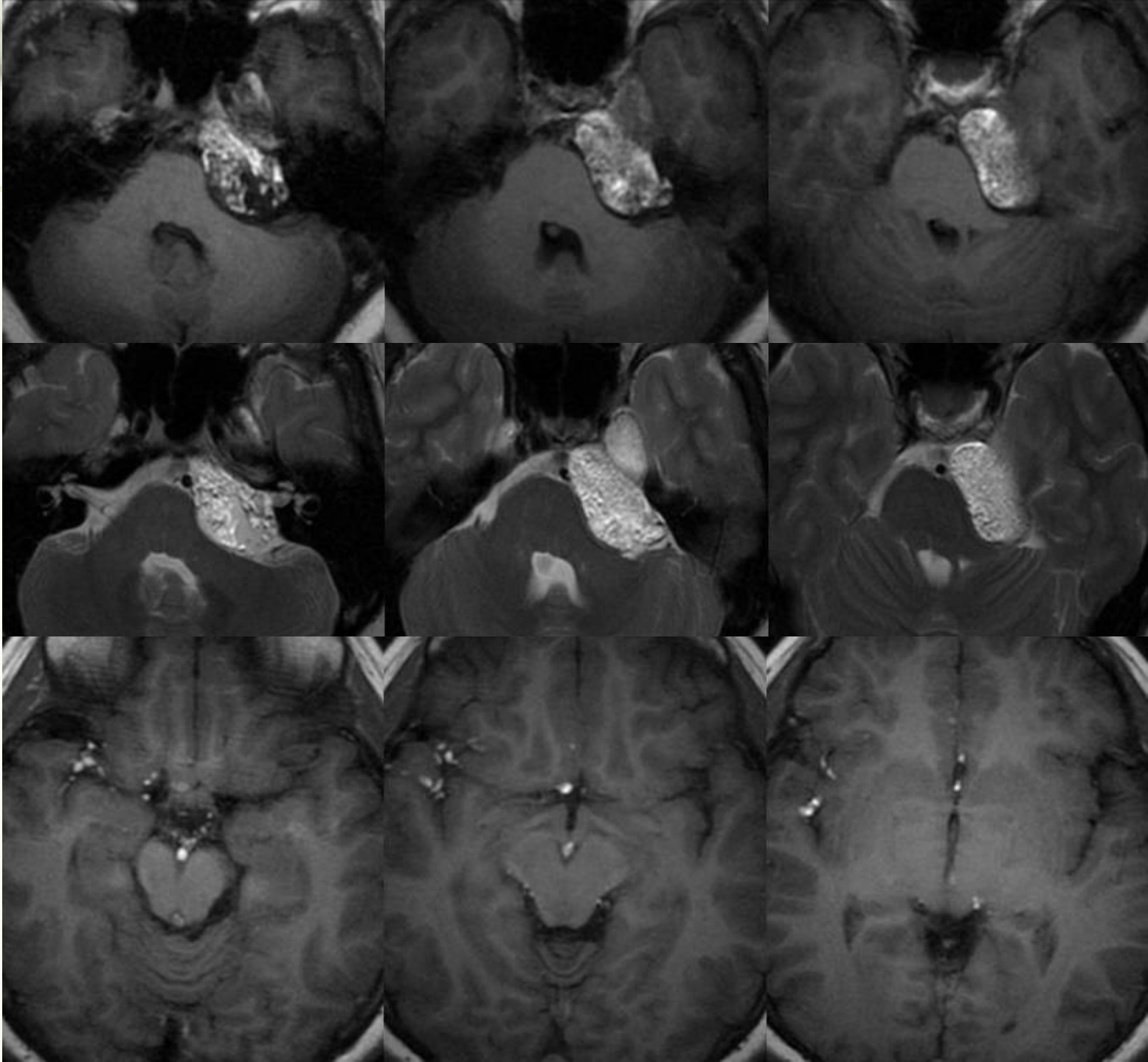


脂肪、脂质成分



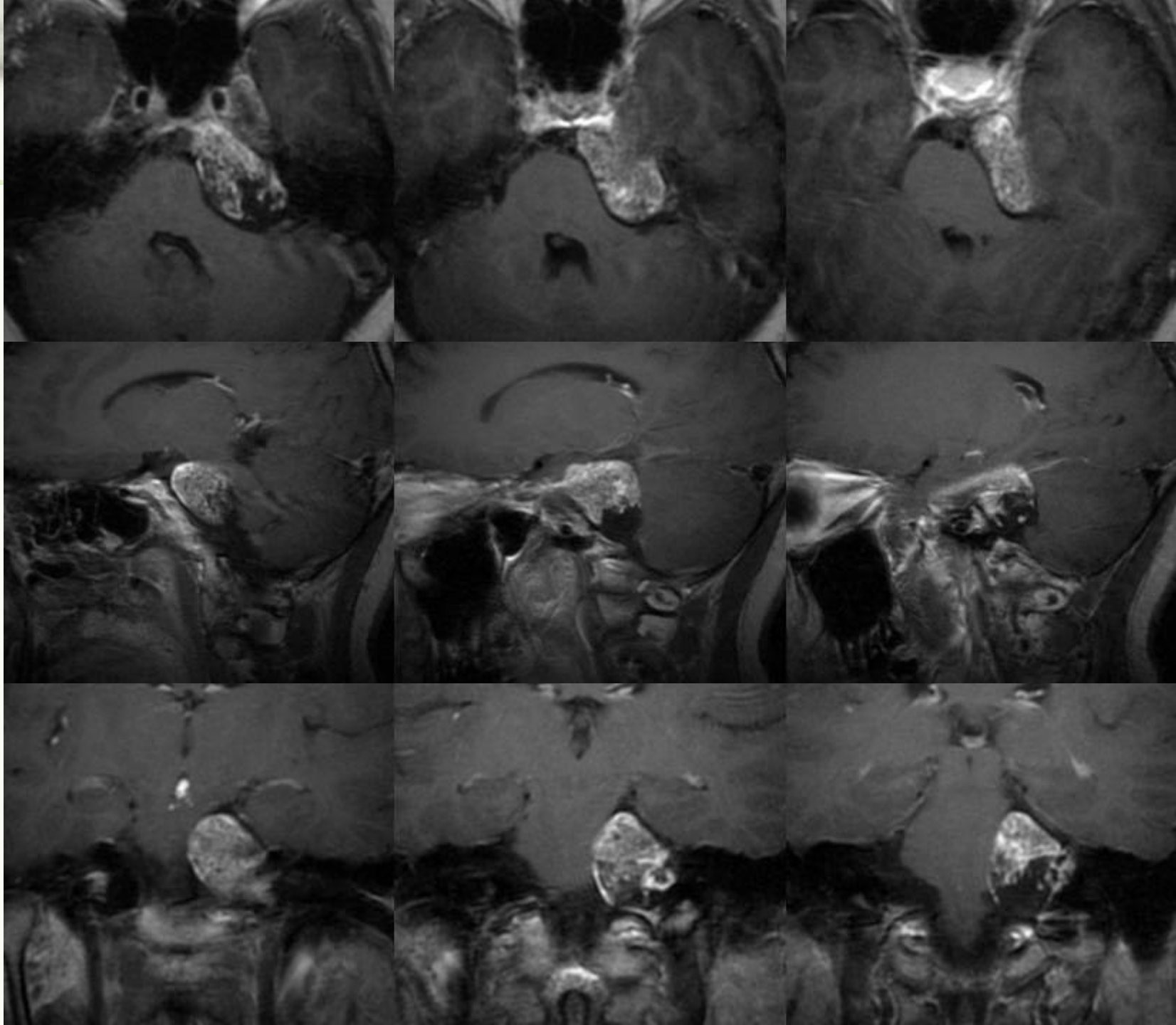
脂肪瘤 M/31Y





F
19Y





皮样囊肿

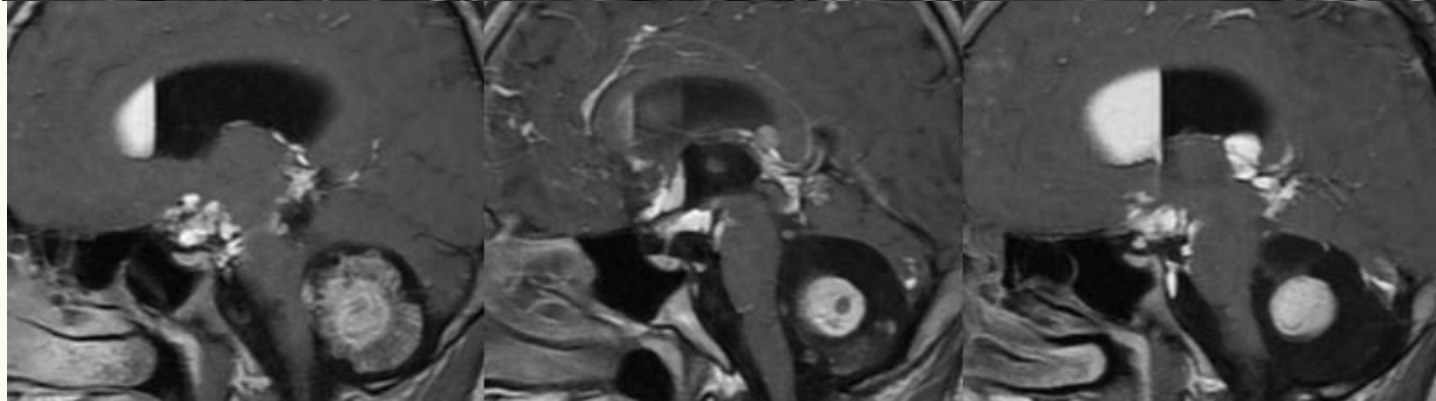
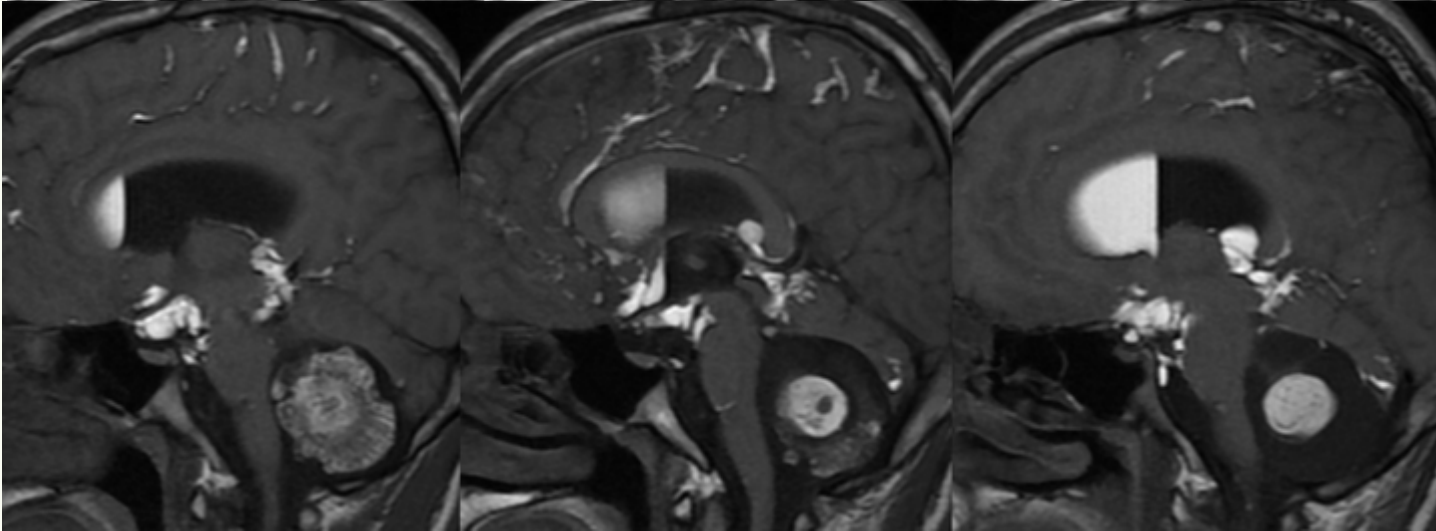
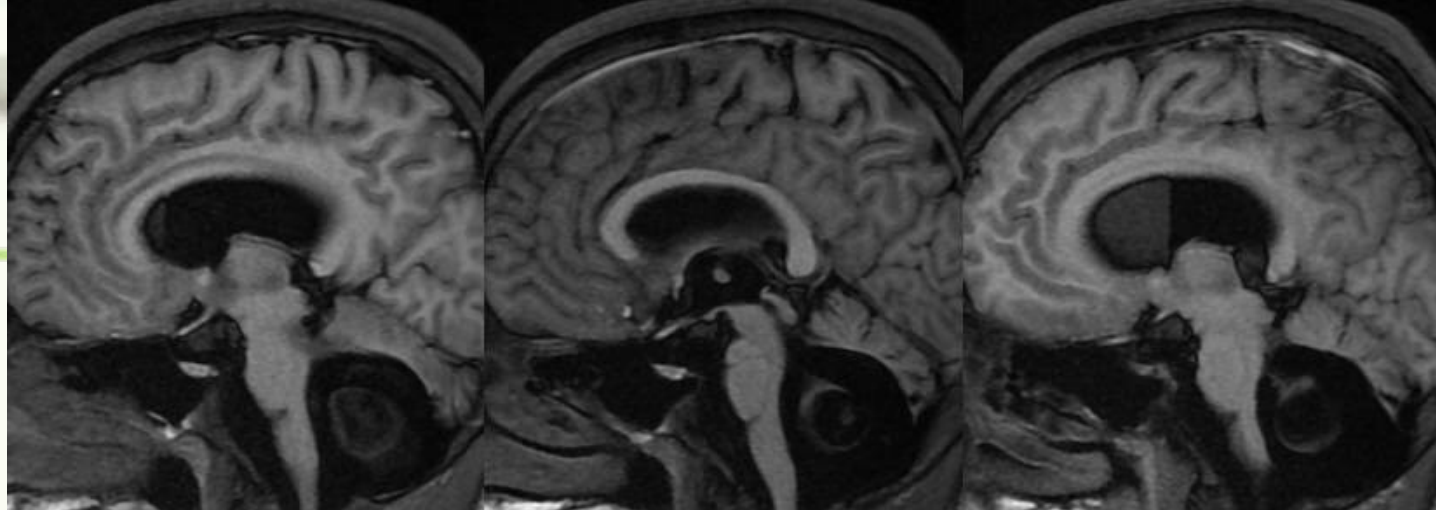
- ◆多好发于鞍区、鞍旁，其次为后颅窝，小脑蚓部四脑室区
- ◆囊肿破裂脂滴播散至脑沟裂池或脑室内
- ◆T1WI高信号，增强后无强化
- ◆30-50岁，男性略多见，症状多为头痛、癫痫



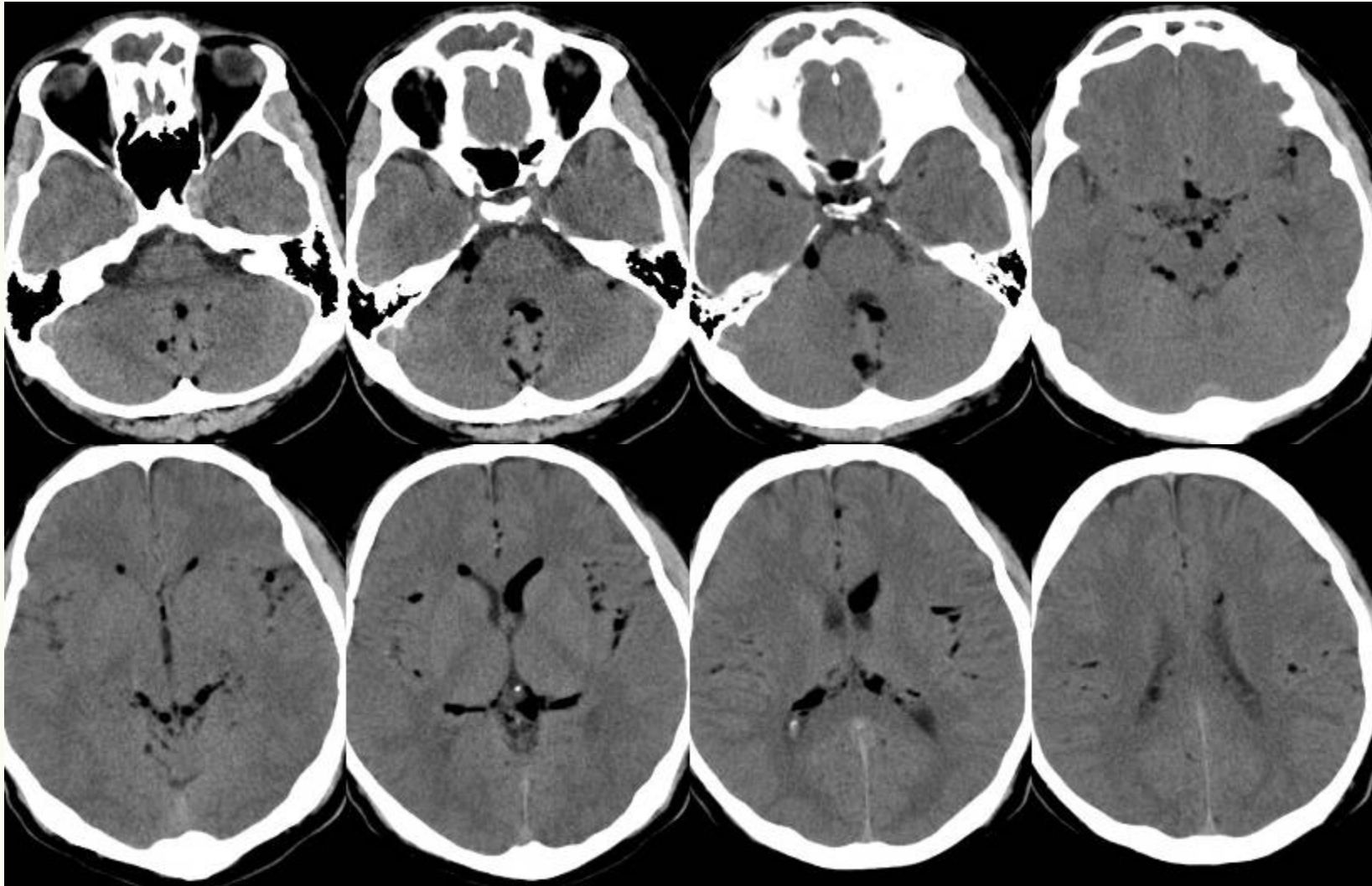
M/17Y

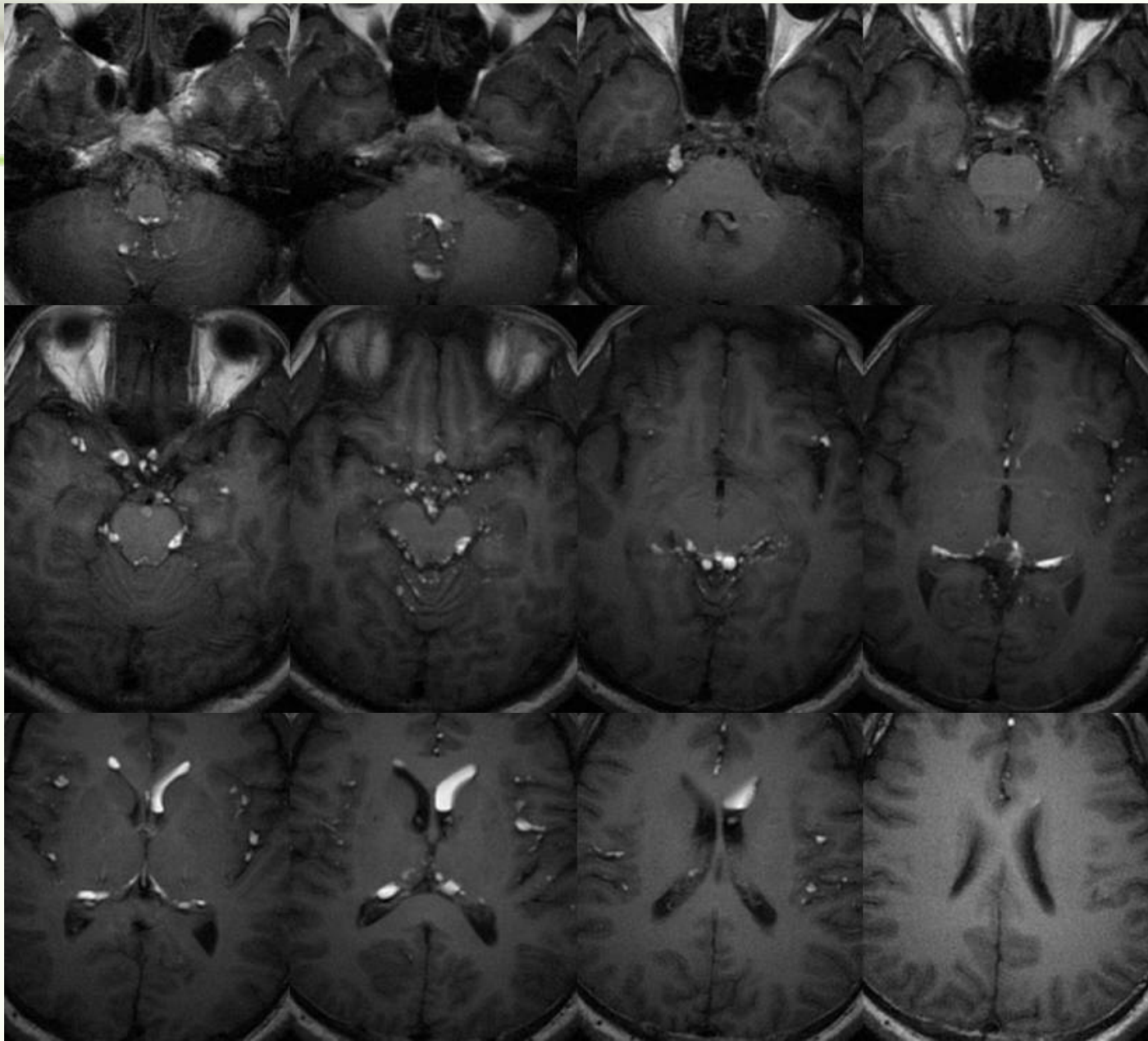


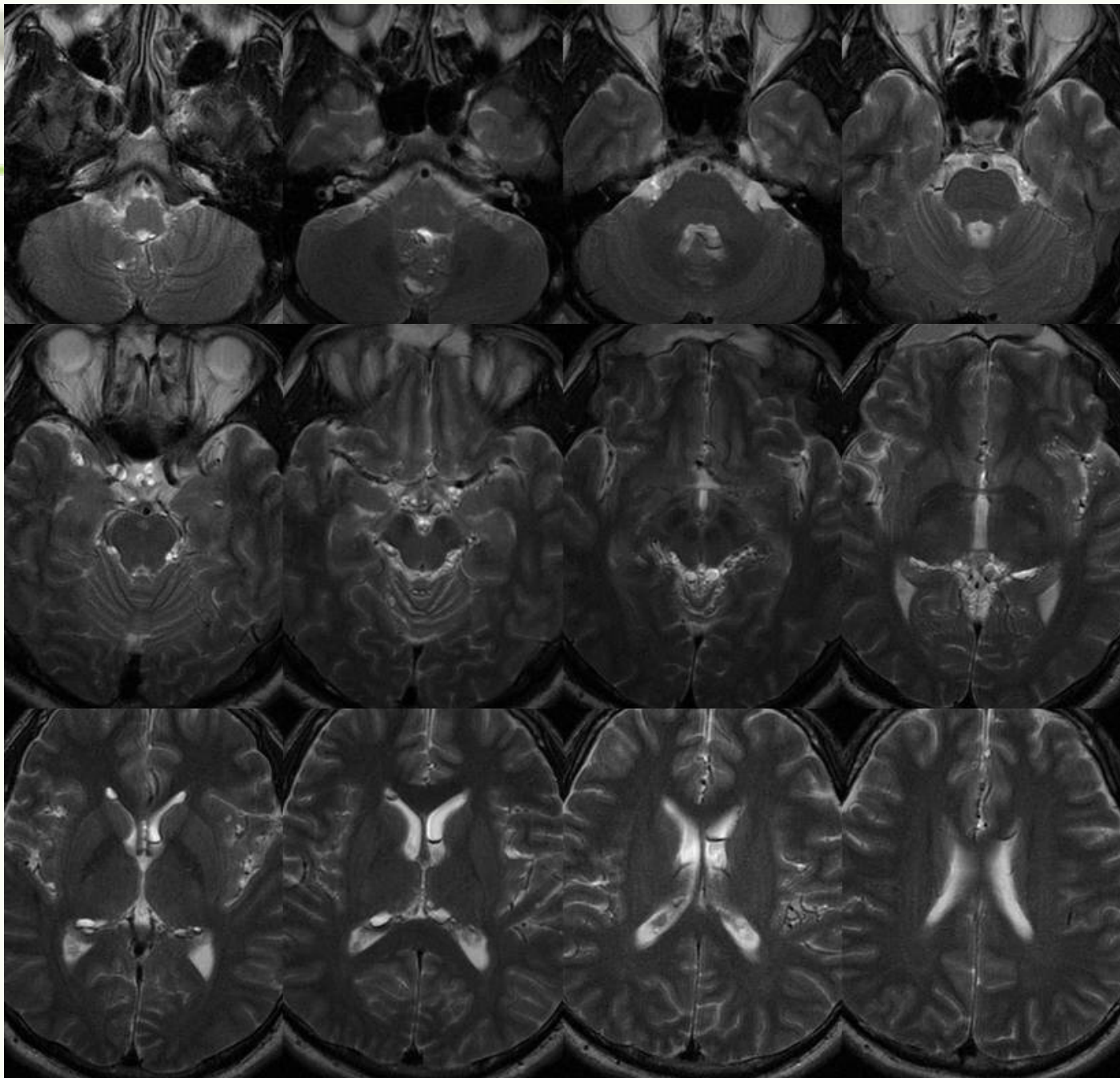


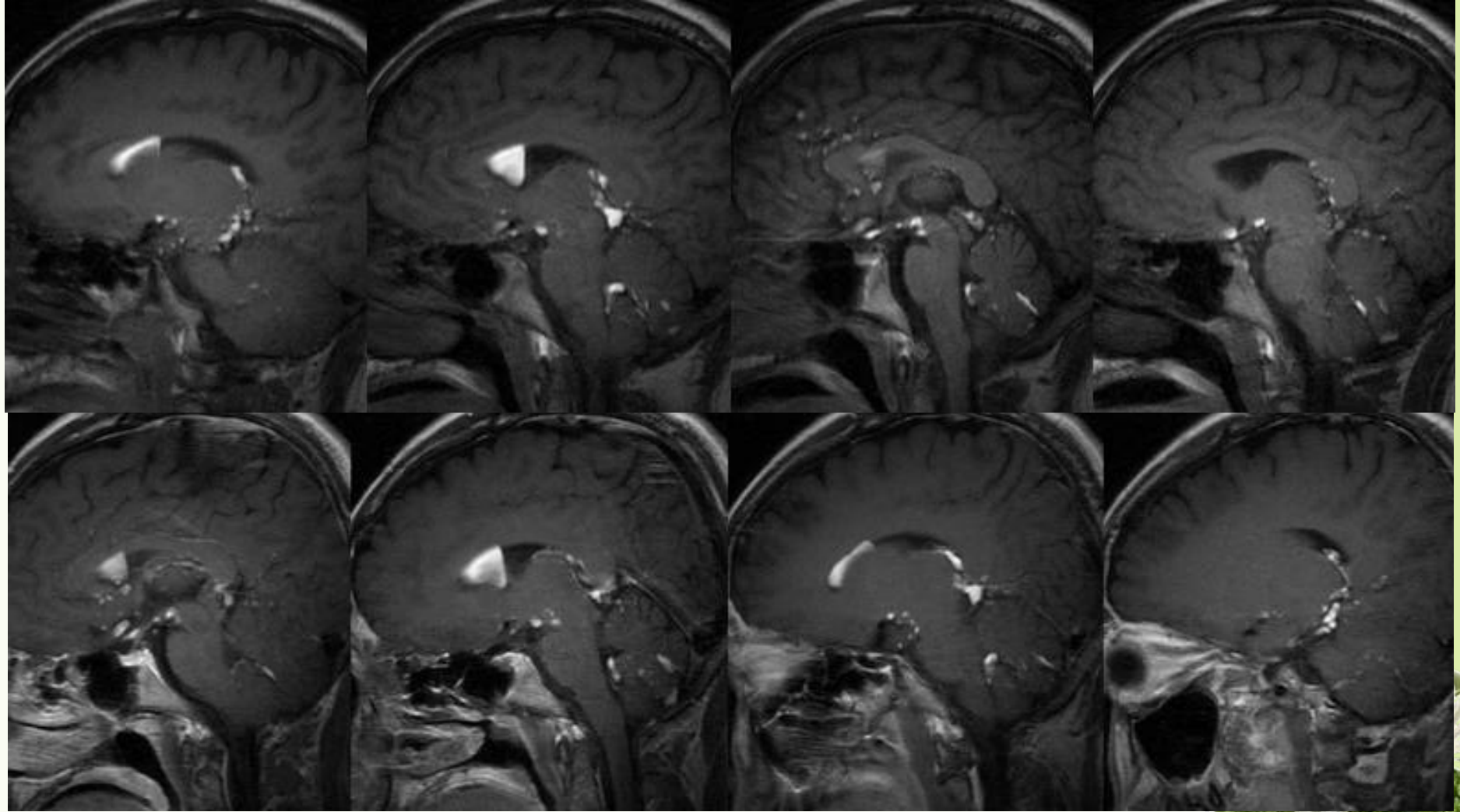


M/24Y



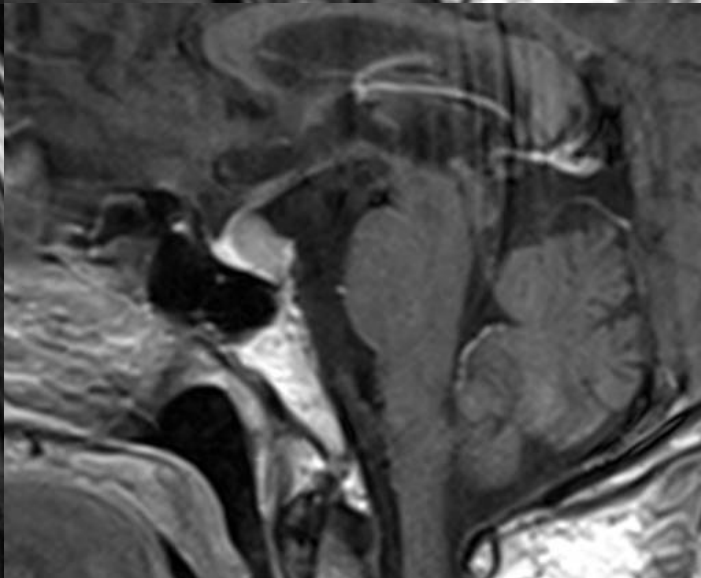
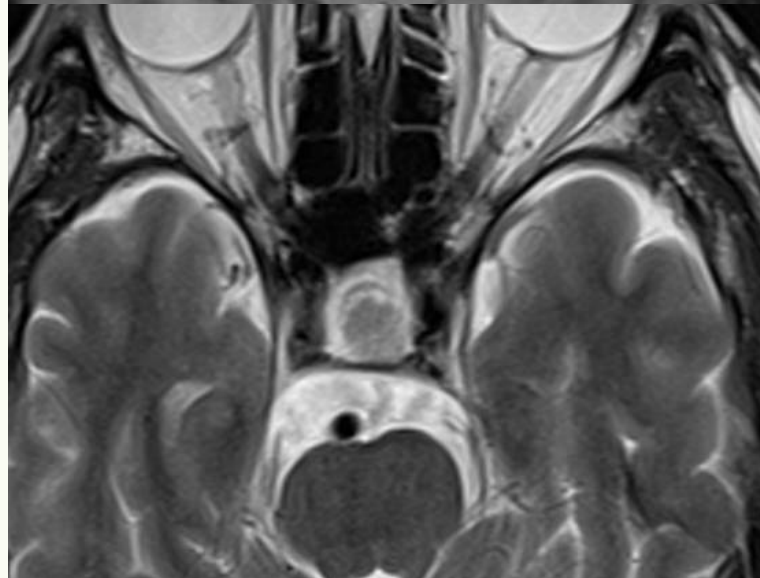
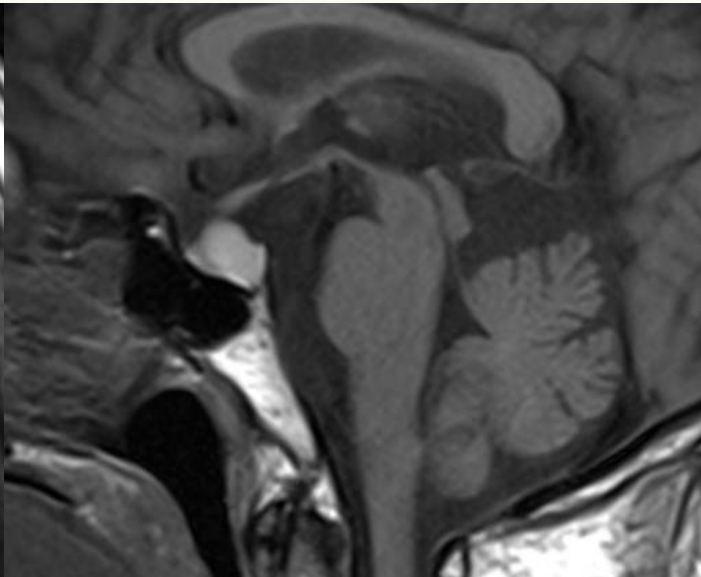
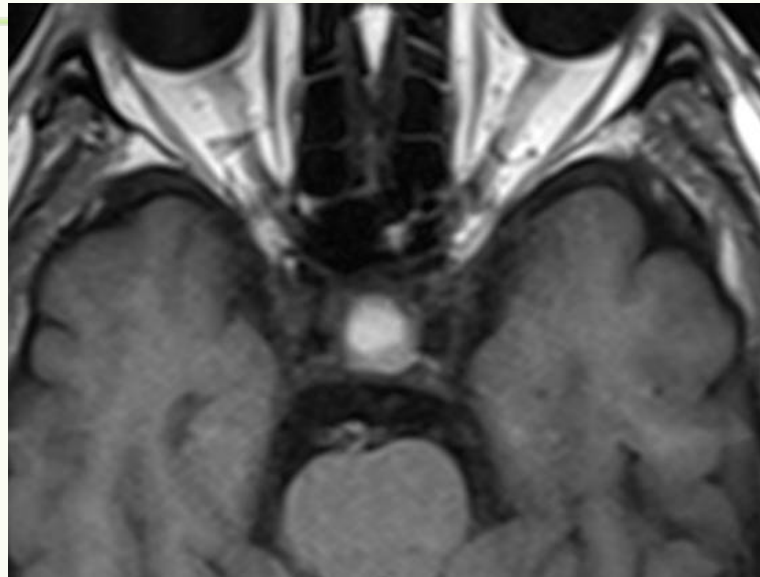






含蛋白成分



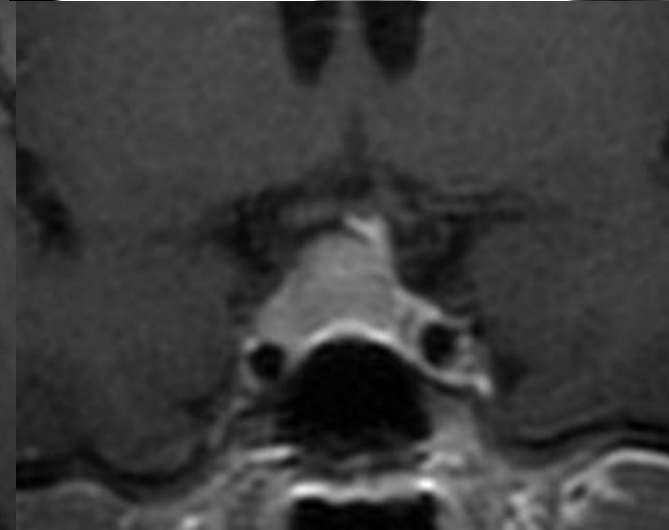
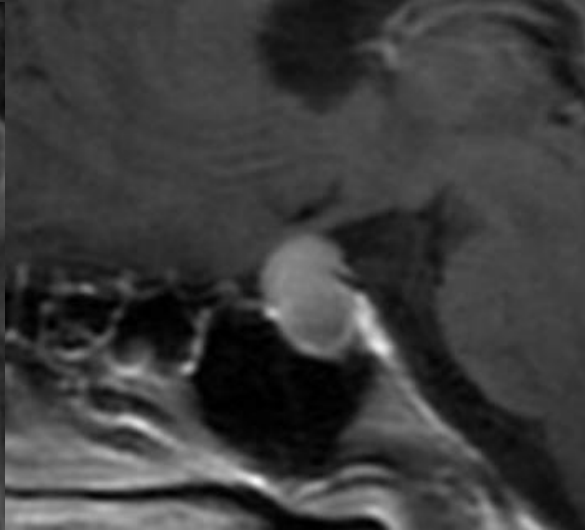
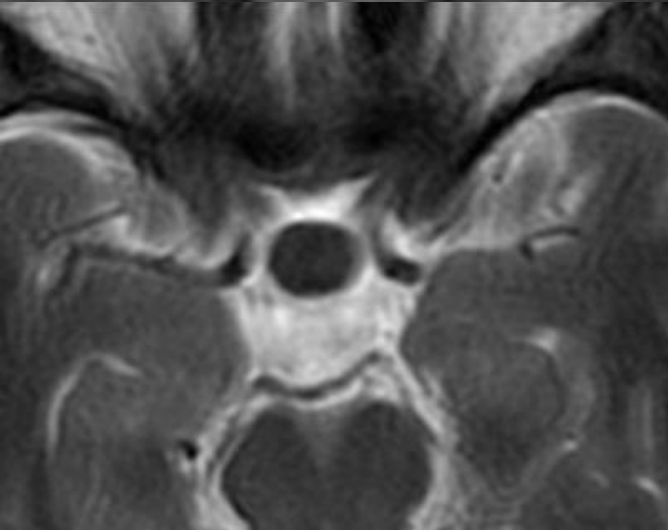
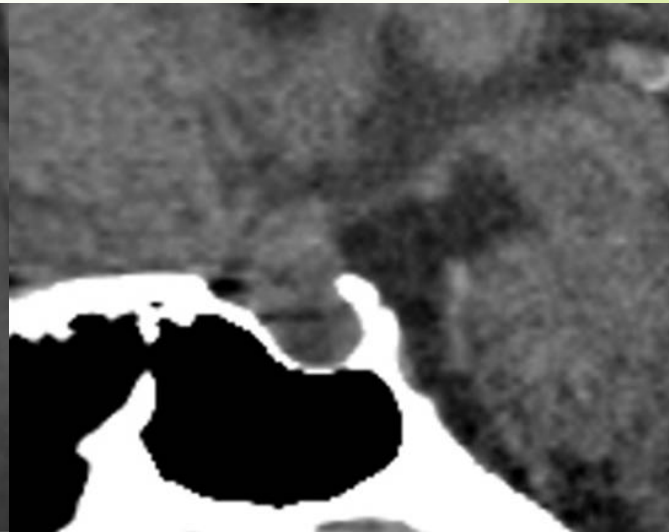
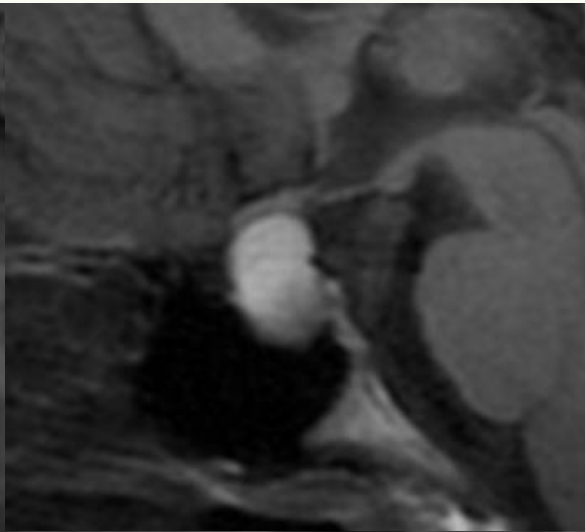
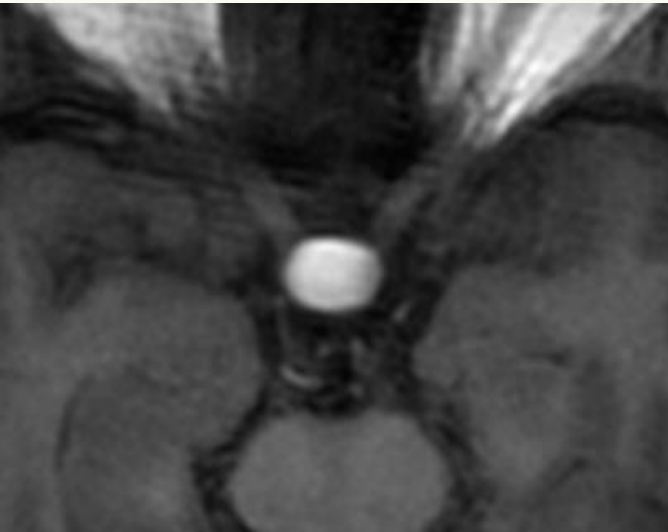


拉克氏囊肿

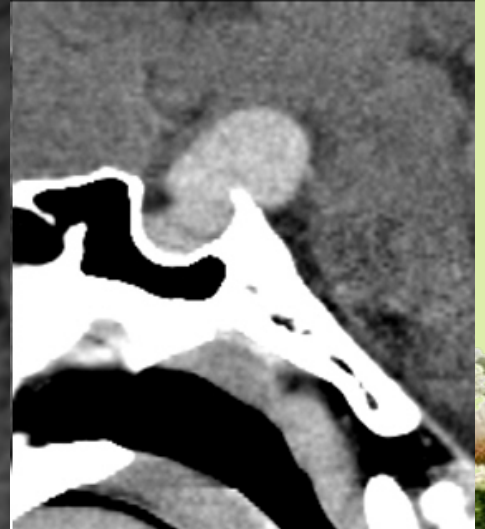
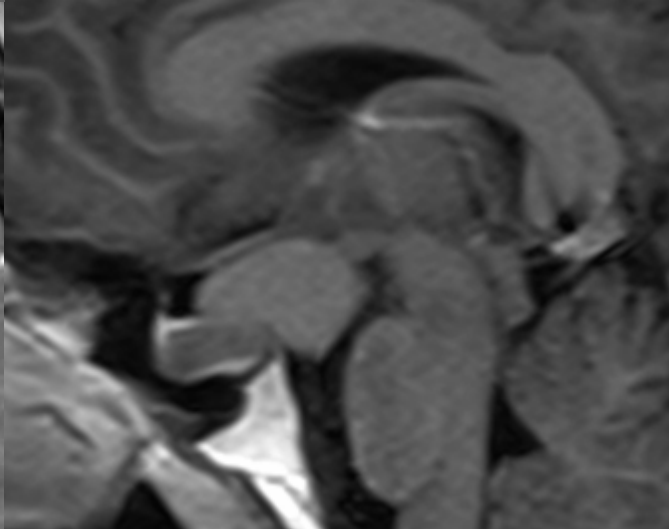
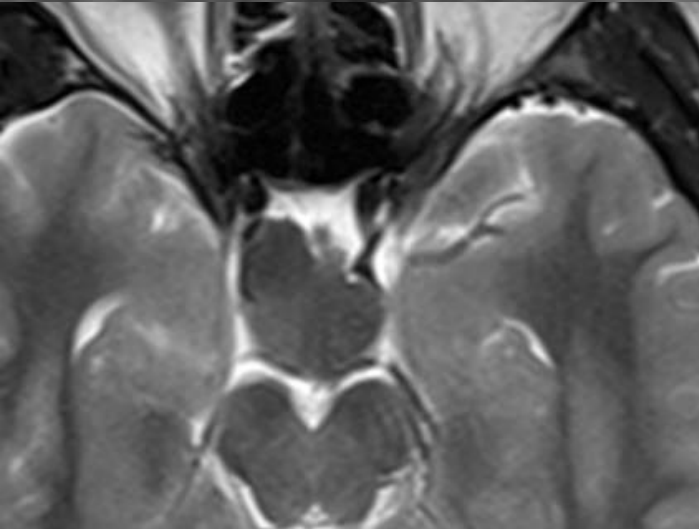
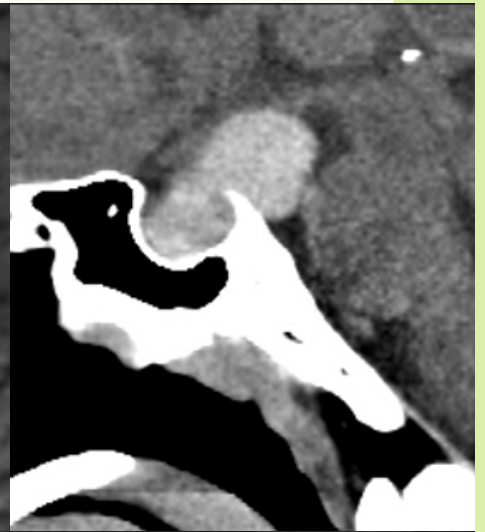
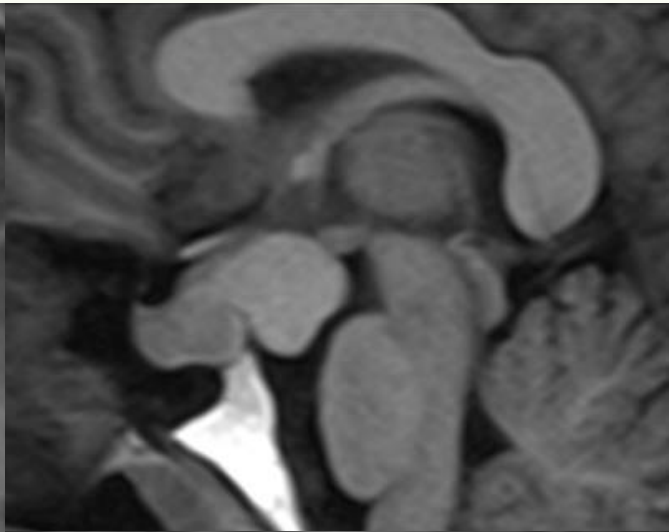
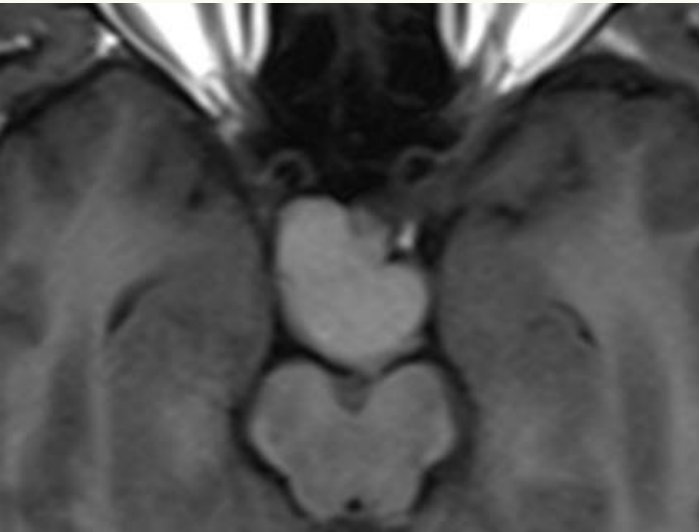
- ◆源自鞍区Rathke囊袋残余组织
- ◆鞍内、鞍上或两者兼有
- ◆约一半拉克氏囊肿T1WI高信号
- ◆鞍内T1高信号T2低信号可作为拉克氏囊肿特征性表现
- ◆多偶然发现，有时会有头痛、视力障碍或垂体症状（如闭经溢乳、尿崩症）



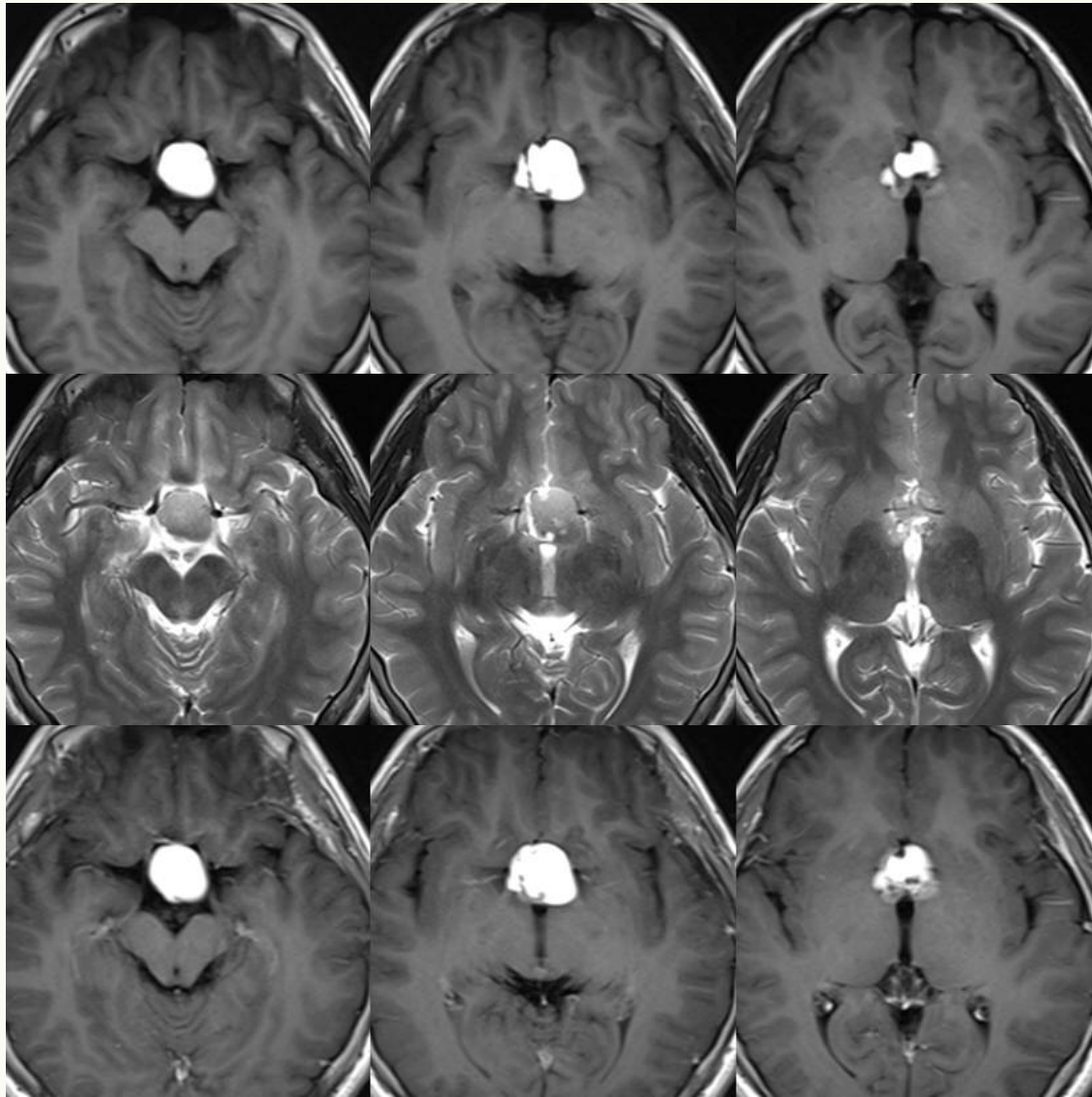
F/38Y

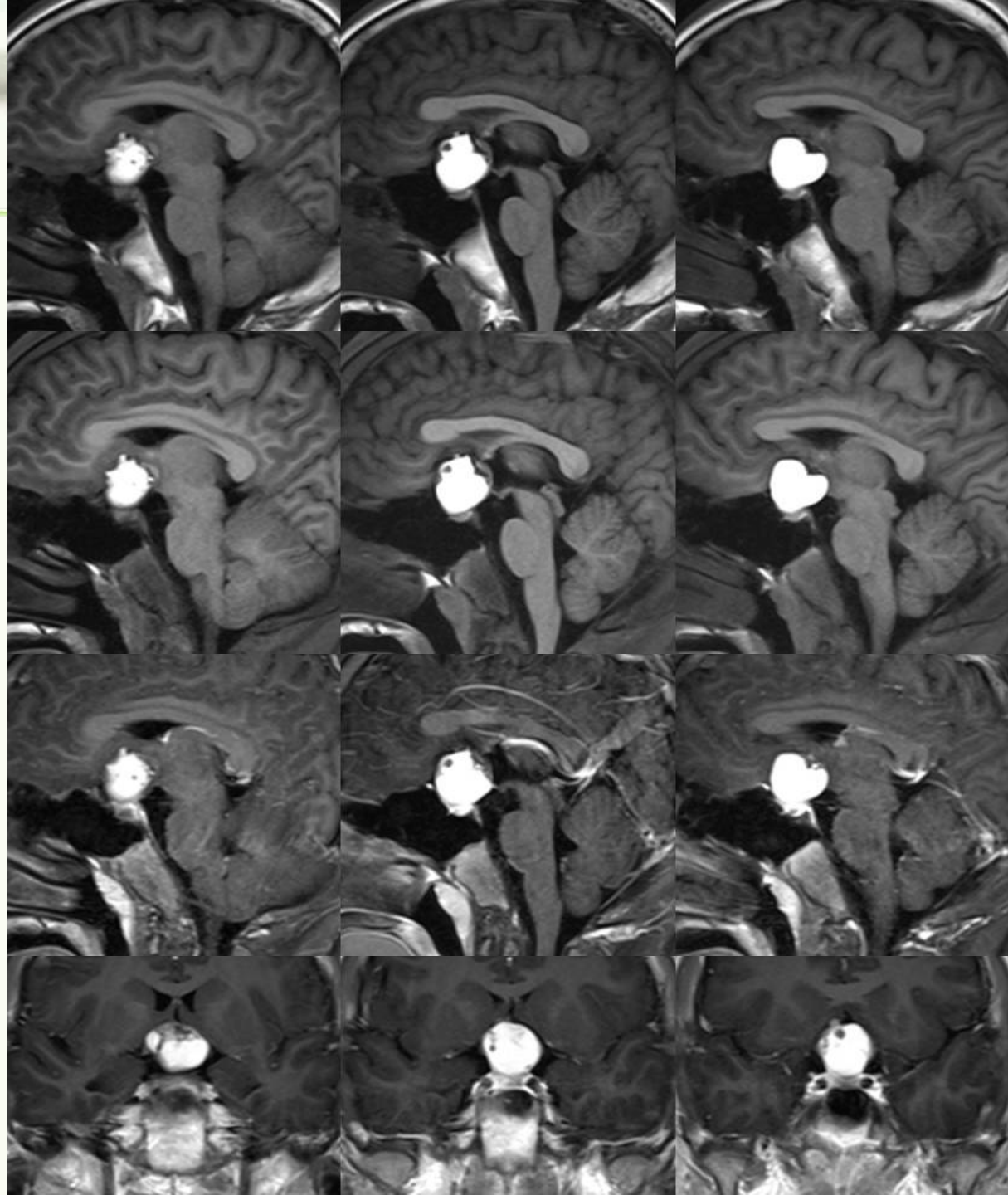


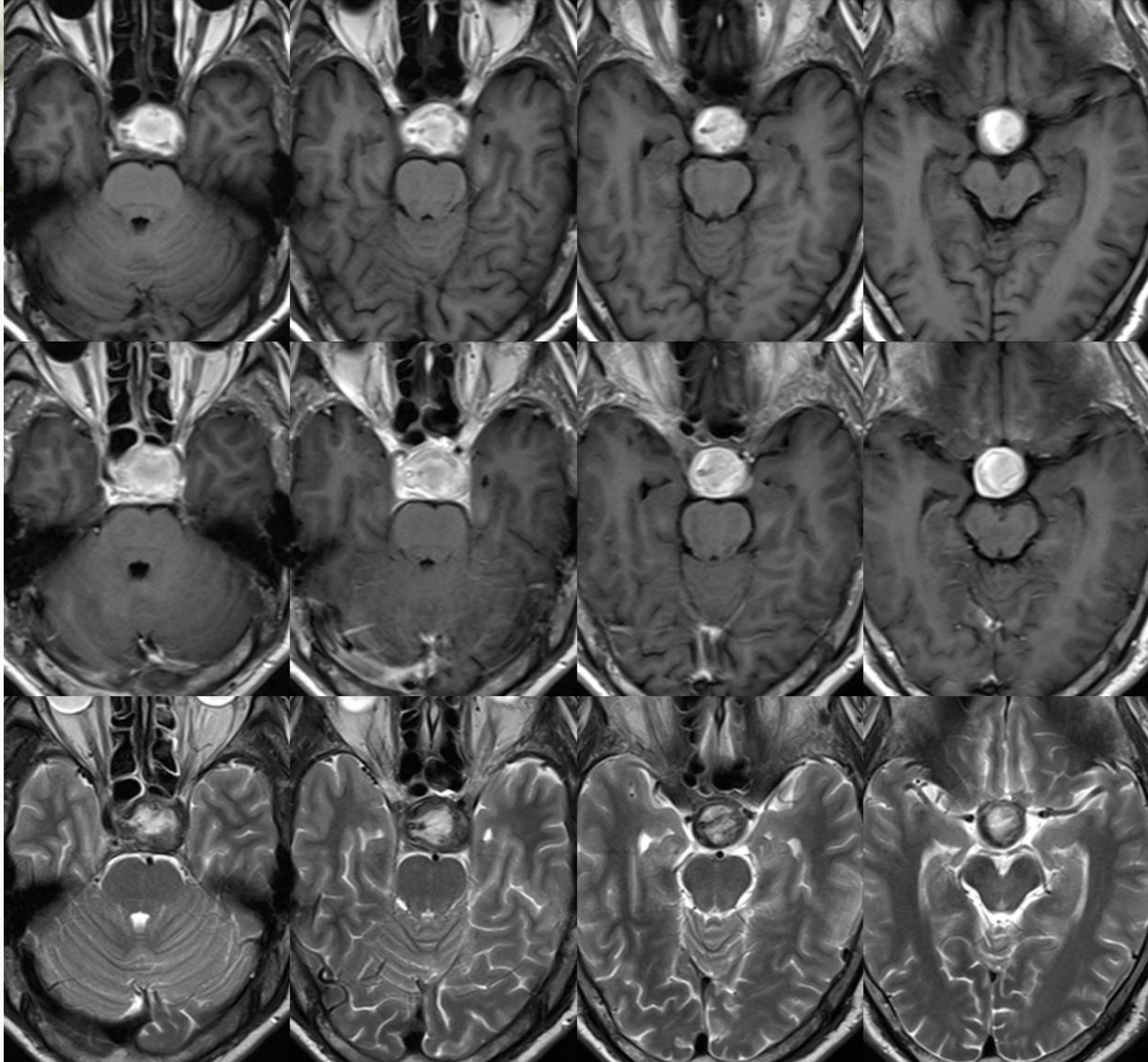
M/27Y



M/13Y

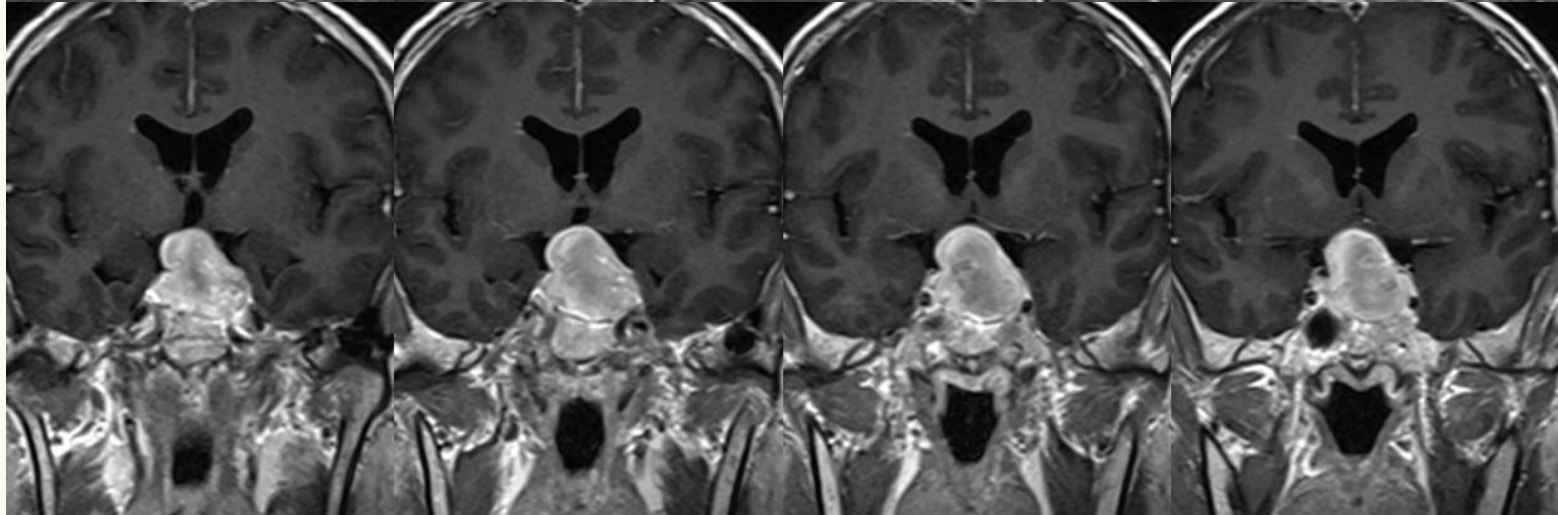
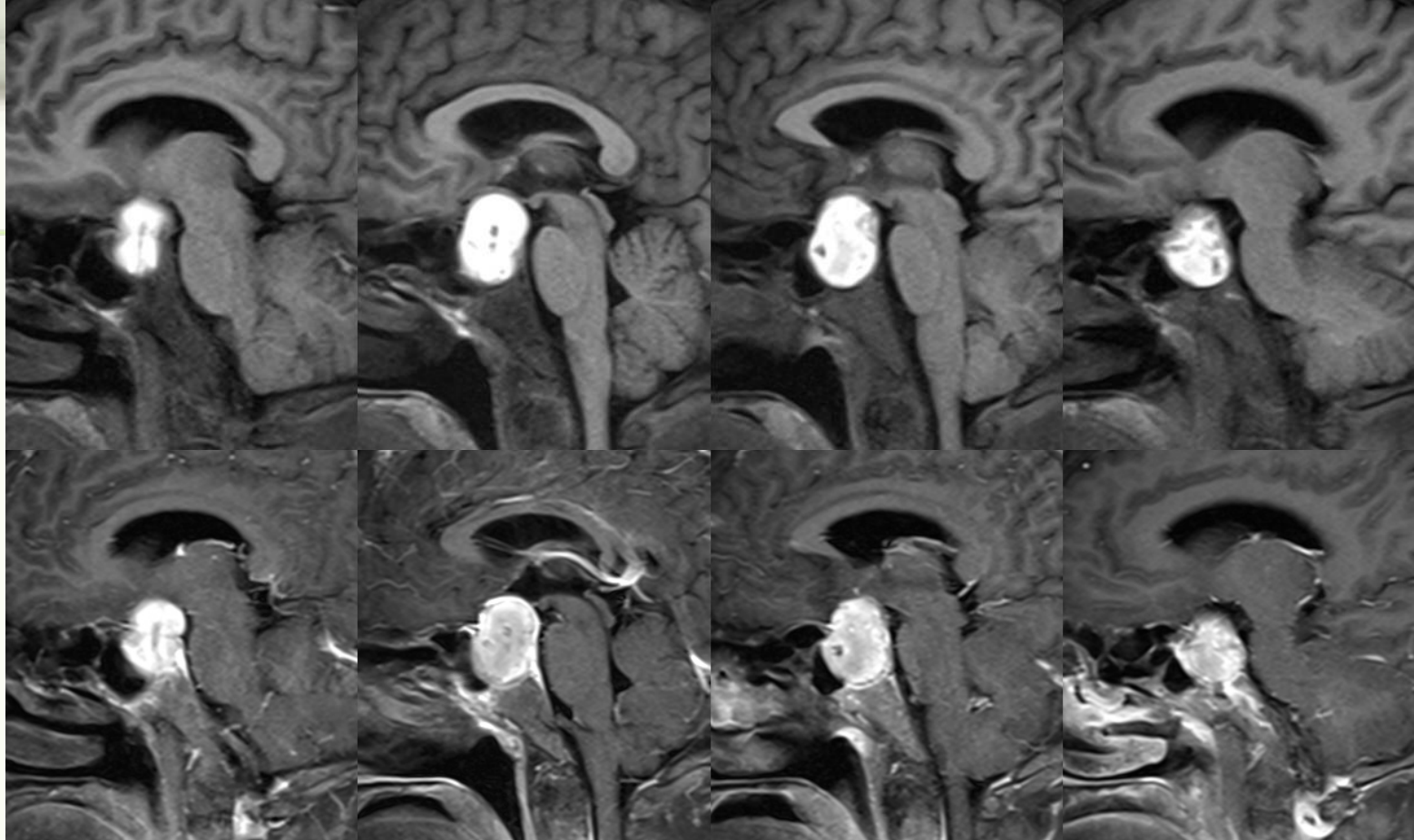


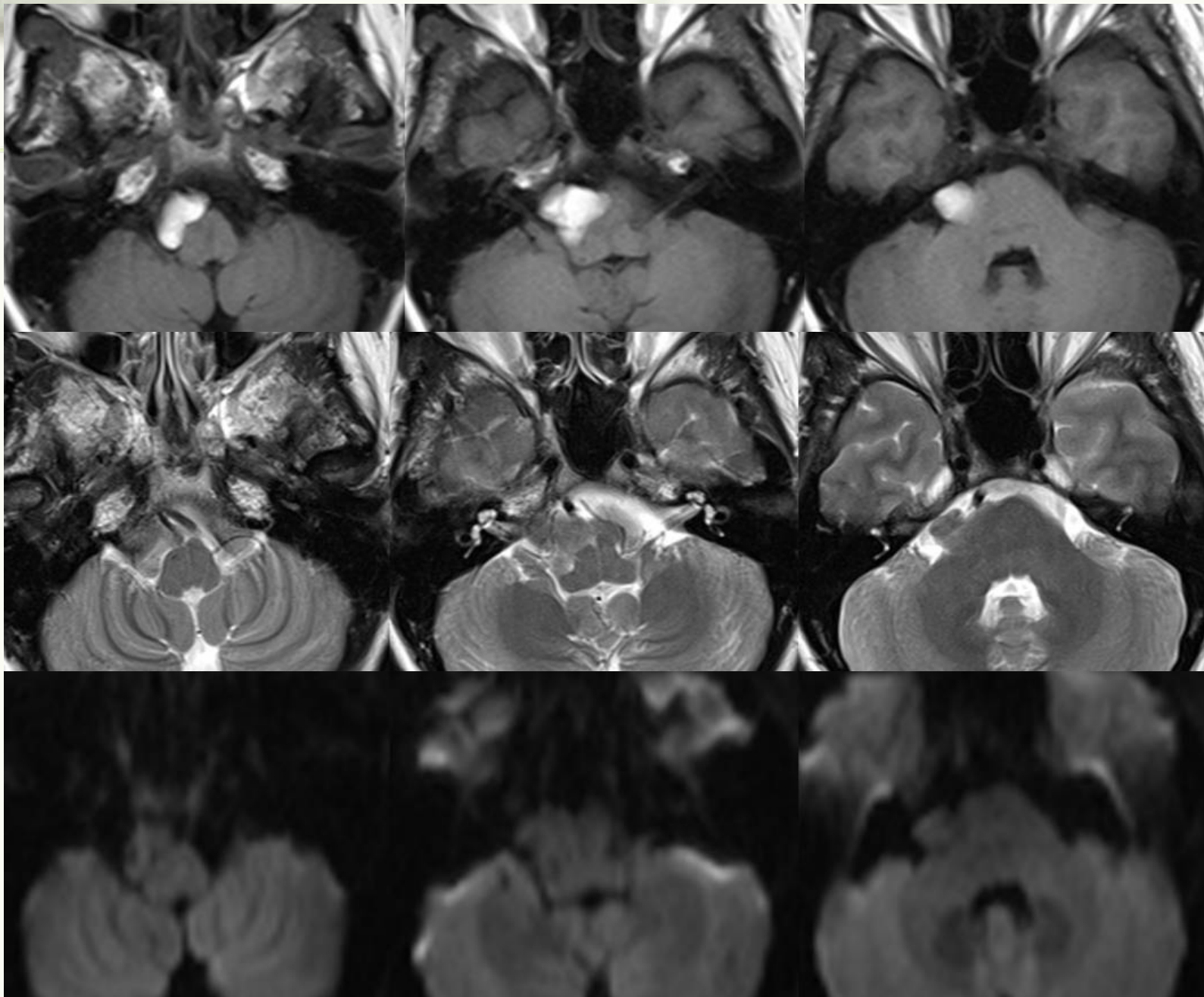




M
42Y

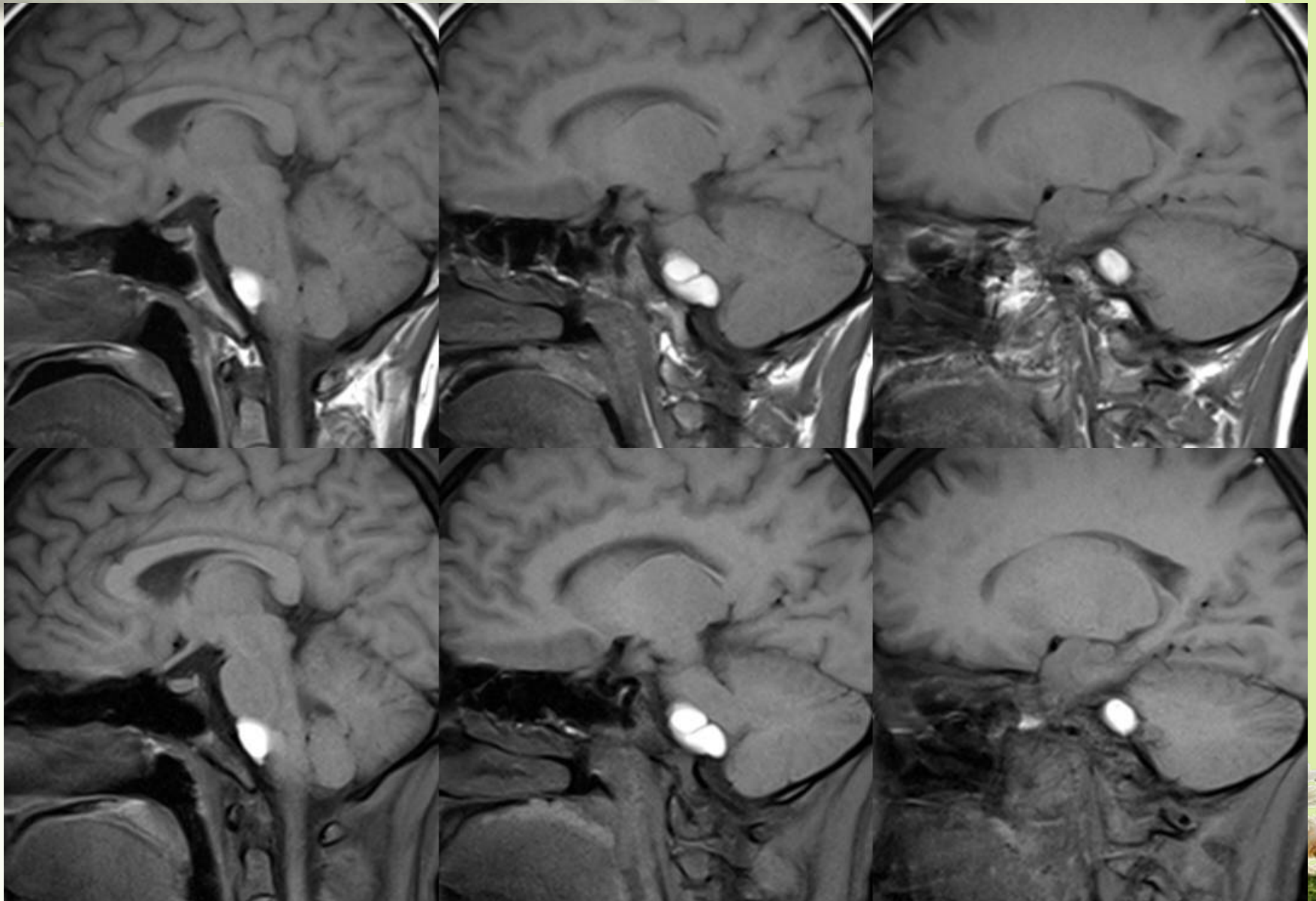






F
37Y



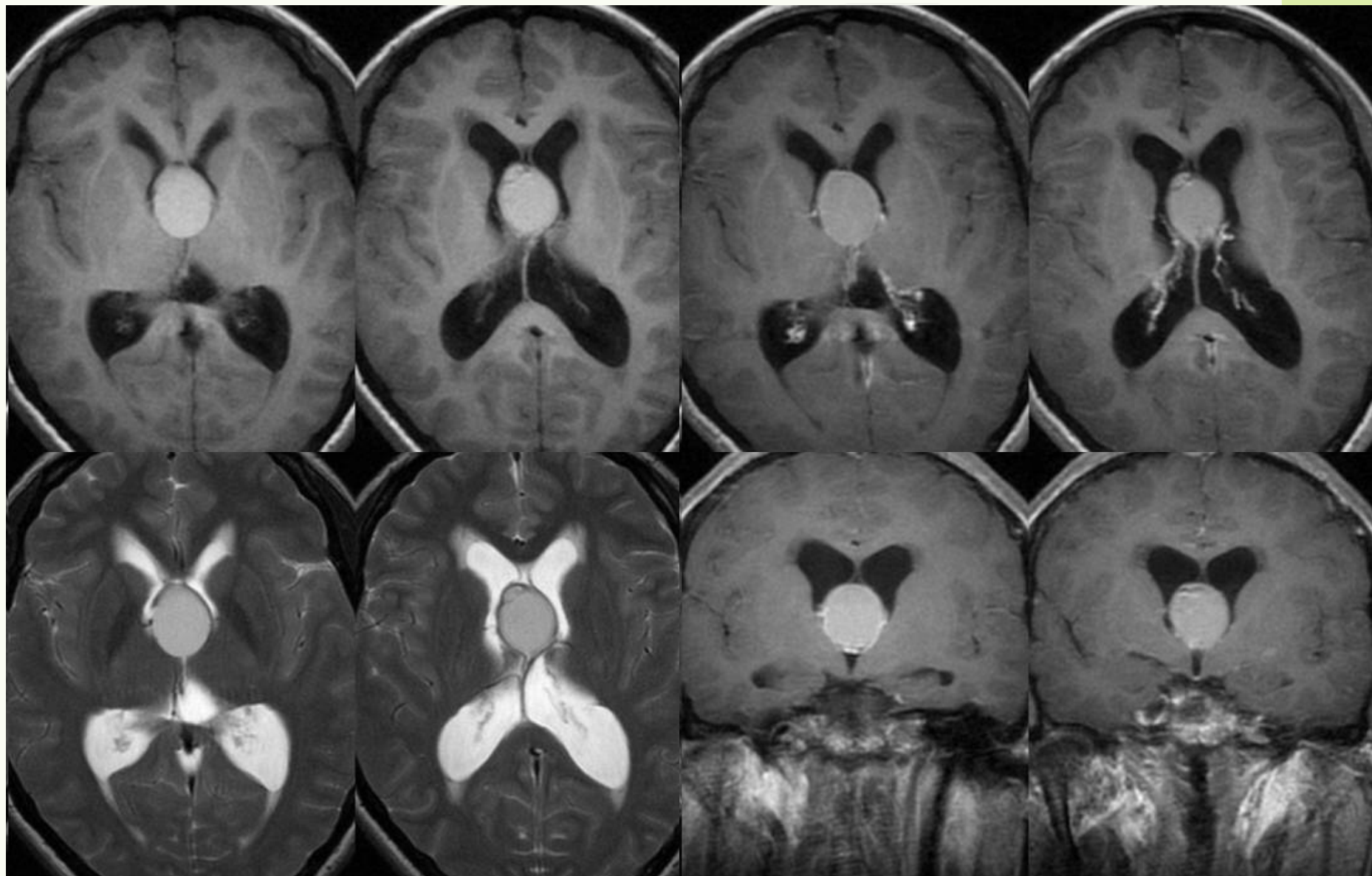


肠源性囊肿

- ◆ 椎管内多见，脊髓腹侧
- ◆ 颅内多位于后颅窝：脑干前方、CPA区
- ◆ T1WI等、高信号，不强化
- ◆ 颅内病变多无症状或头痛



F/28Y



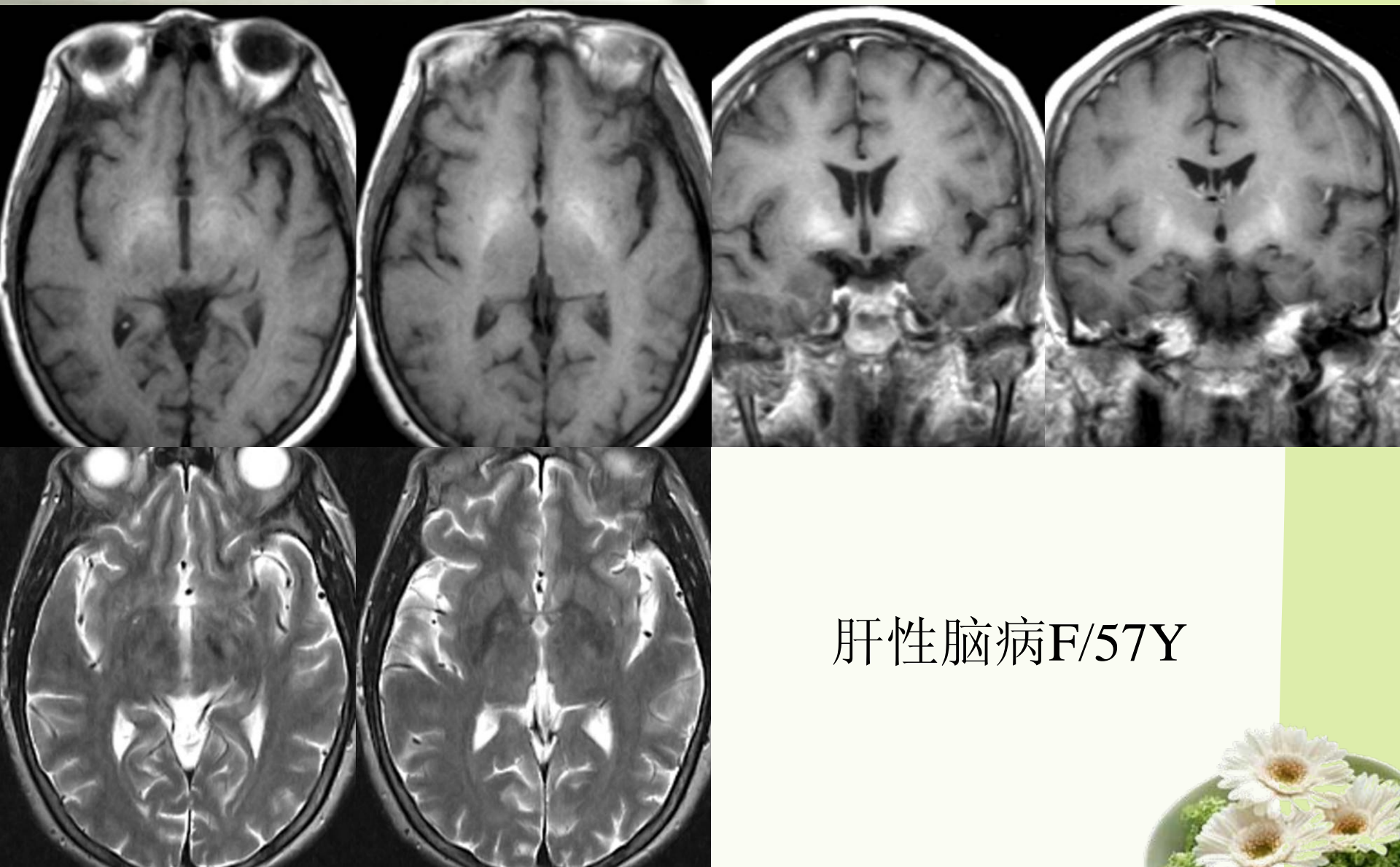
胶样囊肿

- ◆绝大多数位于孟氏孔区
- ◆2/3病例T1WI高信号，1/3病例T1WI等信号
- ◆增强后不强化
- ◆最常见症状：头痛



矿物质





肝性脑病F/57Y



引起T1高信号的物质都有哪些



