Méningiomes et Acétate de Cyprotérone

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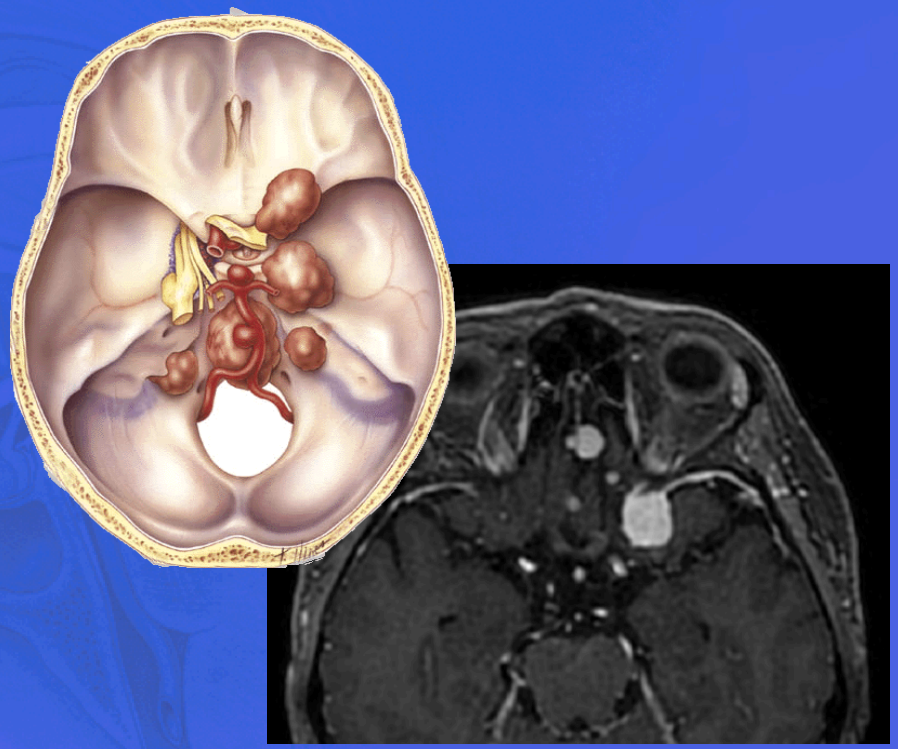

Progestatif de synthèse avec une puissante action anti-gonadotrope et anti-androgénique

Modification en 2011 du résumé du produit :

- CI en cas de méningiome
- Arrêt du produit en cas de méningiome

ANDROCUR 50 mg	ANDROCUR 100 mg
• Hirsutismes féminins majeurs d'origine non tumorale (idiopathique, syndrome des ovaires polykystiques), lorsqu'ils retentissent gravement sur la vie psycho-affective et sociale. • Traitement palliatif anti-androgénique du cancer de la prostate.	• Traitement palliatif anti-androgénique du cancer de la prostate. • Réduction des pulsions sexuelles dans les paraphilies en association à une prise en charge psychothérapeutique.

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PMCID: PMC5991277
PMID: 29930875

Multiple meningiomas in two male-to-female transsexual patients with hormone replacement therapy: A report of two cases and a brief literature review

Rahul Raj,* Miikka Korja, Päivi Koroknay-Pál, and Mika Niemelä

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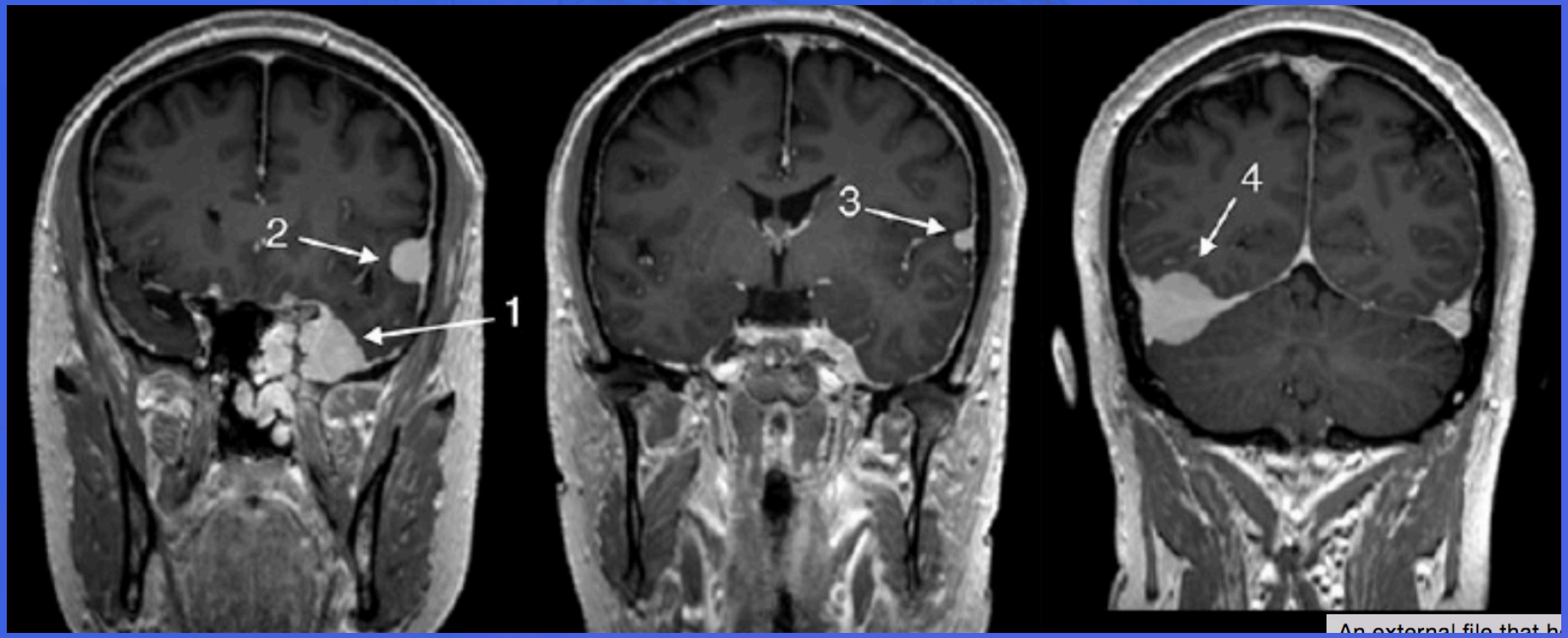
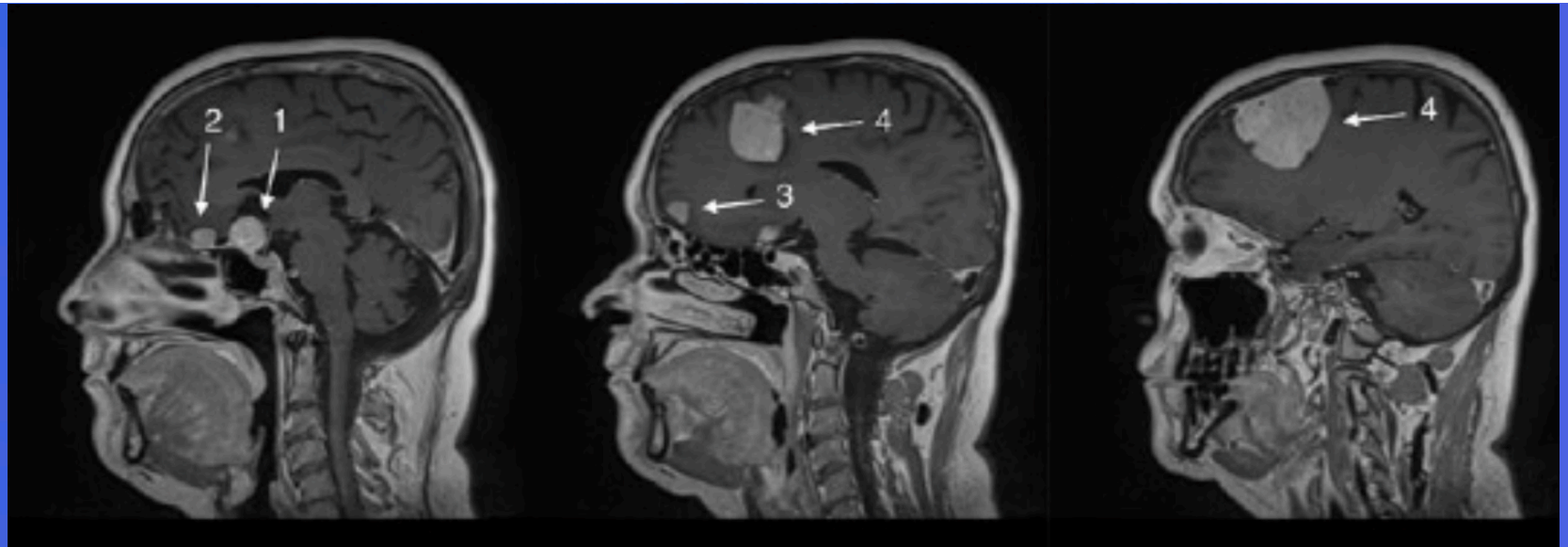


A 43-year-old genetic male underwent a male-to-female sex-change operation. The patient had been taking HRT for several years before the sex-change operation. Following surgery, the patient continued HRT, consisting of estradiol cream (0.6 mg/g) twice a day and cyproterone acetate (Andocur®) 50 mg once a day.

This patient presented 7 years later with progressive bilateral visual compromise leading to complete left-sided vision loss. Clinical examination showed normal visual acuity on the right side (20/20). The left eye could only perceive light sensation, and clinical fundus examination revealed left-sided optic disk atrophy, with a dilated pupil and a limited direct pupillary light constriction reflex.

The patient was sent to neuroimaging and magnetic resonance imaging (MRI) showed a total of four meningiomas: (1) a suprasellar meningioma compressing the left optic nerve and chiasm causing the patient's symptoms, (2) a small frontobasal midline meningioma at the level of cribriform plate, (3) a small frontal right-sided convexity meningioma, and another (4) large frontal right-sided convexity meningioma [Figure 1, upper row]. The patient was put on dexamethasone before the operation.



Meningiomas 1, 2, and 4 (suprasellar, frontobasal midline, frontal right-sided convexity) could all be surgically accessed in one single session with adequate results (Simpson grade III for suprasellar and frontobasal meningiomas and Simpson grade I for convexity meningioma). The histological diagnosis in all these meningiomas revealed World Health Organization (WHO) grade I tumors with low proliferative index (MIB-1 <5%). Further immunohistochemical (IH) profiling revealed a high level of progesterone receptor expression and lower level expression of estrogen receptors.

Immediately after surgery, the limited function that had been present in the left eye remained unchanged, but unfortunately the visual acuity of the right eye acutely deteriorated (to light perception only). Postoperative head computed tomography (CT) showed no intracranial hemorrhage. The patient was taken back to the operating room for exploration. Intraoperative finding showed acute swelling of the right optic nerve, and a right-sided optic canal decompression and optic nerve sheath fenestration were performed. Unfortunately, vision could not be restored in the right eye and the patient became legally blind since both eyes suffered from compromised vision. After close inspection of anesthesiology reports, no hypotensive insult before or during the first or second operation was noted.

Postoperative MRI showed complete removal of (1) suprasellar meningioma, (2) frontobasal midline meningioma, and (4) frontal right-sided convexity meningioma [Figure 1, lower row]. Clinical examination did not show any improvement in visual function and the patient developed bilaterally dilated pupils without any pupillary reaction to light. This was corroborated by bilateral optic atrophy and bilateral blindness. The remainder of the postoperative course was uneventful, and HRT was continued.

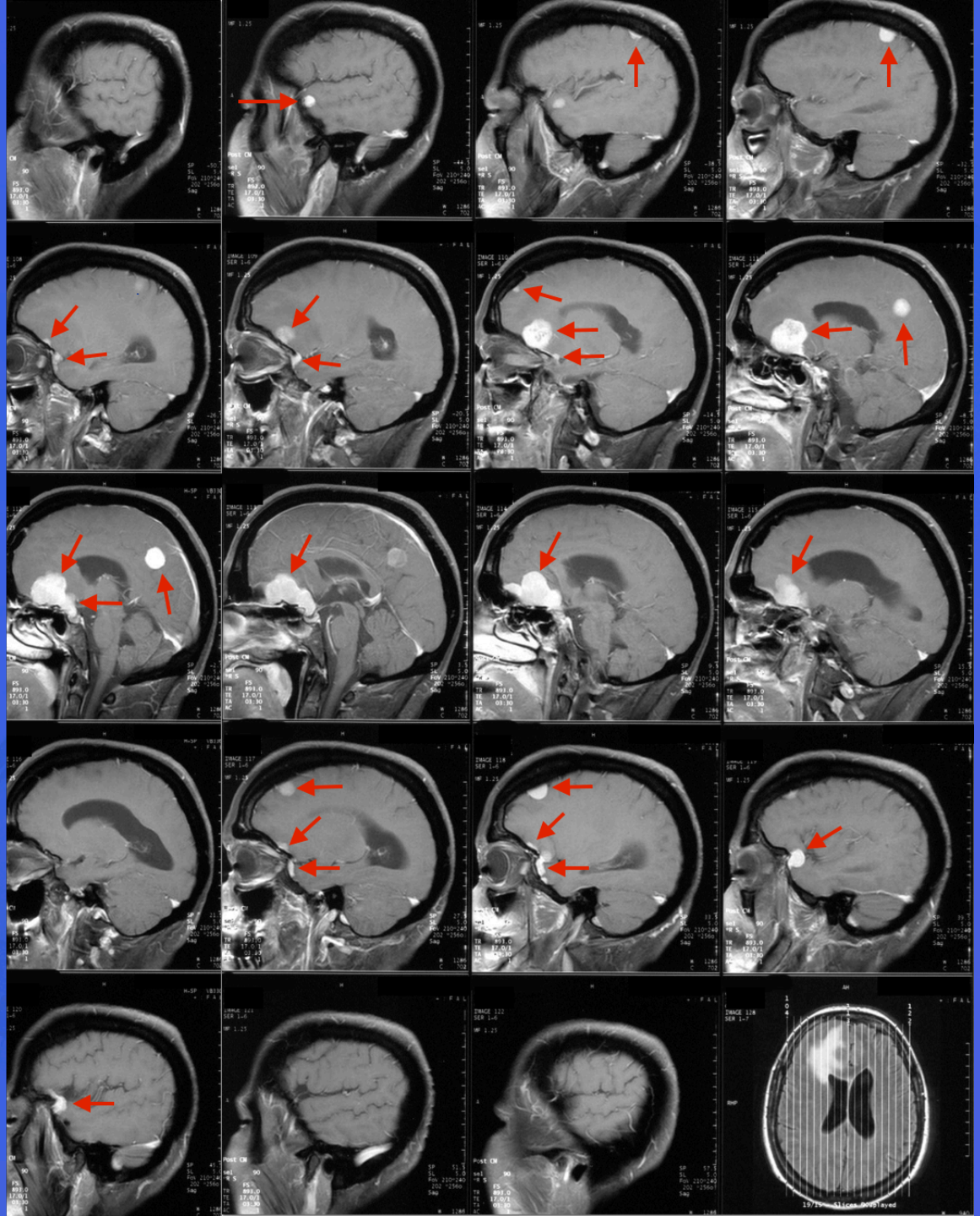
The patient was followed with sequential imaging, and 1 year after surgery a repeat MRI showed no regrowth of resected meningiomas but slight growth of small frontal right-sided midline convexity meningioma (3) that had been left untouched [Figure 2, upper row]. HRT was continued unchanged.

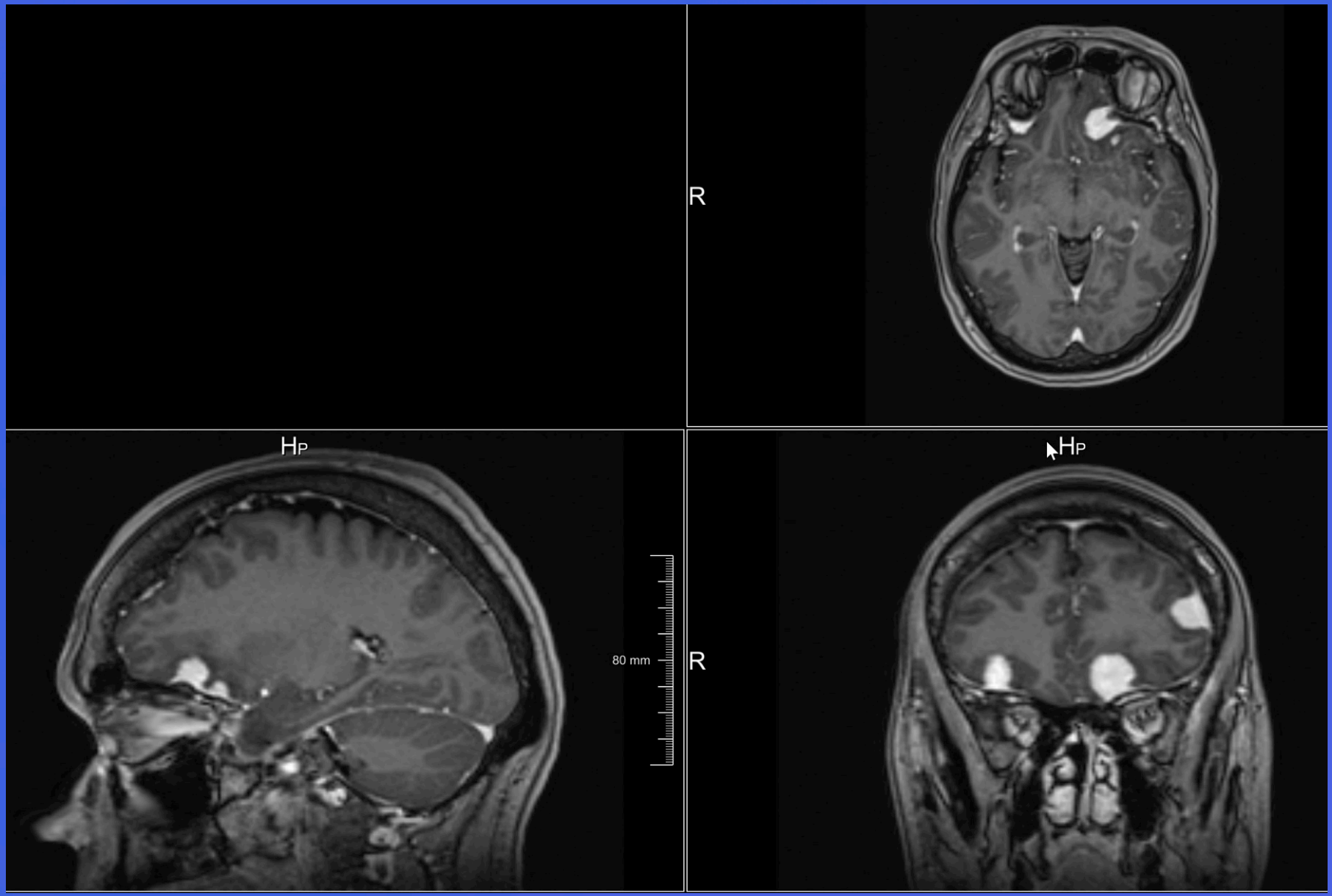
At 2 years, postoperative MRI showed regrowth of a (5) new suprasellar meningioma and further growth of unoperated frontal right-sided midline convexity meningioma (3). The patient was managed expectantly and HRT was continued unchanged [Figure 2, middle row].

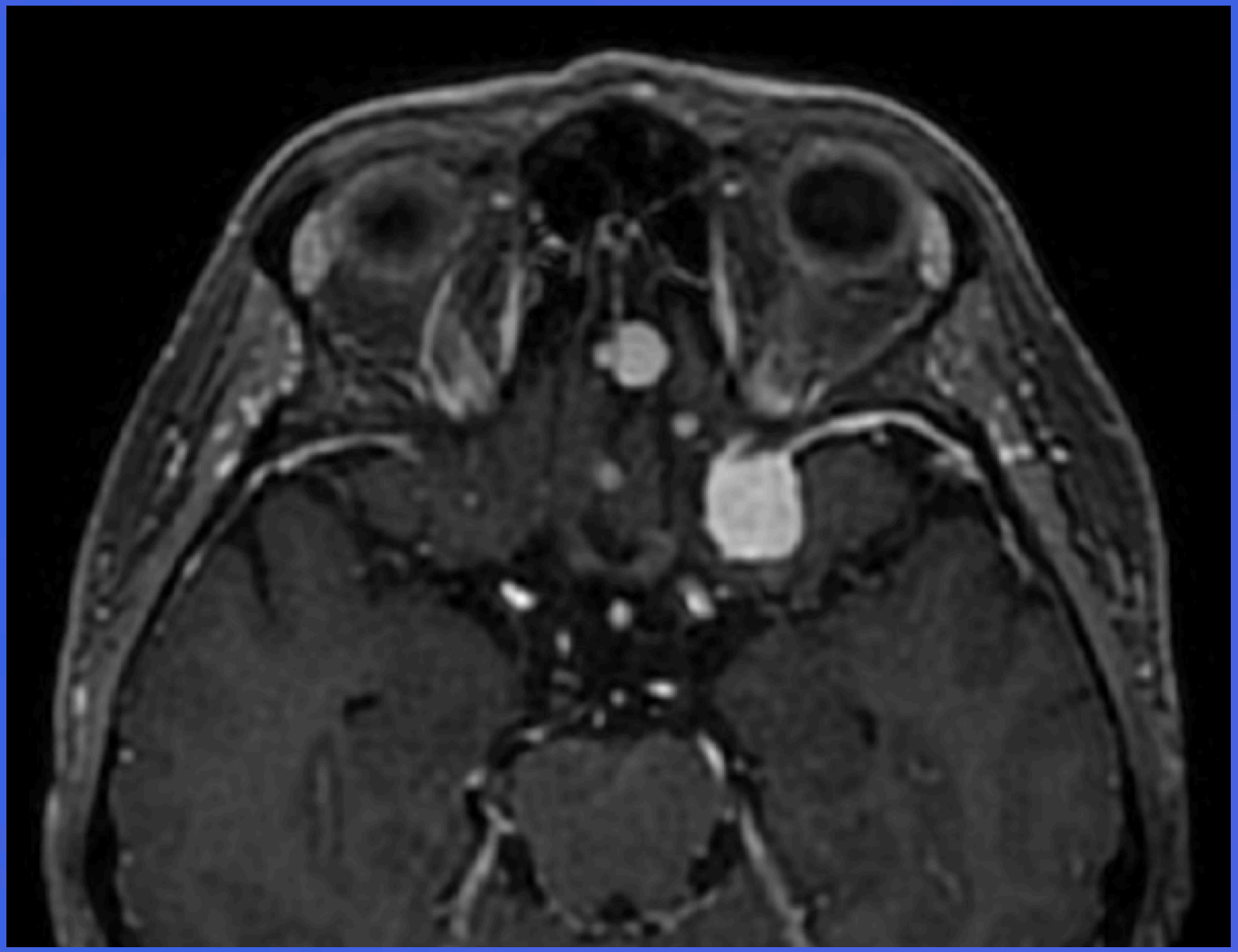
Four years after operation, another MRI showed significant growth of (5) suprasellar meningioma and (3) of the previous unoperated right-sided midline frontal convexity meningioma [Figure 2, lower row]. The patient's neurological status has not changed, and the patient did not develop any new deficits. This prompted a discussion with the patient regarding the safety of his HRT, but the patient remained determined to continue HRT. Thus, due to progressive growth of meningiomas, a second operation has been scheduled.

CONCLUSION

The use of exogenous sex hormones may play a role in the development and growth of meningiomas. The risk may be dose-dependent, which would suggest that risk is especially high in male-to-female transsexual patients taking high doses of exogenous sex hormones over long periods. Radiological screening may be justifiable for transsexual patients with a history of long-standing high-dose exogenous sex-hormone therapy and special focus should be paid to transsexual patients displaying new neurological symptoms or those already diagnosed with a meningioma.




R
HP
80 mm
R
HP



PRENEZ VOUS DE L’ANDROCUR ?

ECE 2008

10th European Congress of Endocrinology

Berlin, Germany

03 - 07 May 2008

European Society of Endocrin

Endocrine Abstracts (2008) **16** P158

Does cyproterone acetate promote multiple meningiomas?

Sebastien Froelich[1], Nassim Dali-Youcef[2], Patrick Boyer[1], Pierre Kehrli[1], Daniel Maitrot[1], Johan Auwerx[2] & Jean-Louis Schlienger[1,3]

Multiple meningiomas are rare benign tumors (1.5% of all meningiomas). They are either sporadic or associated with neurofibromatosis. Their long term morbidity is high due to the frequency of surgical procedures needed to overcome the absence of efficient adjuvant therapy. We present a cohort of patients in whom we strongly suspect cyproterone acetate to be responsible for the development and progression of multiple meningiomas.

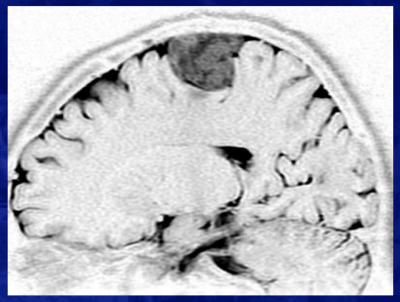
Patients and methods: We report 9 female patients (33–62 yo, mean: 46 yo) with multiple meningiomas (2 to 11) without any clinical evidence of neurofibromatosis. All patients were treated with cyproterone acetate (50 mg/day) for various indications for a time period ranging from 10 to 20 years.

Results: A rapid onset of clinical symptoms was observed in 6 patients with rapid decreased visual acuity in 5 patients, suggesting rapidly progressive meningiomas. Lesions were preferentially located on the skull base. Cyprotenone acetate was stopped at the time of diagnosis in 2 patients. Six patients were followed radiologically for a period exceeding 5 months (8 to 81) before treatment withdrawal. A significant increase in tumor size and/or the development of new lesions was observed in all cases. In six patients, the follow-up period after treatment withdrawal was more than 5 months (5 to 32 months, mean: 17 months) and no clinical nor radiological progression was observed.

Discussion: We strongly suspect cyproterone acetate as a promoting factor in the development of multiple meningiomas in concert with a particular endocrine status. We could face a particular histopathologic entity considering the preferential skull base location of lesions and the unusual absence of progression after treatment withdrawal.

Conclusion: Although undescribed in the literature, the possibility of a relationship between multiple meningiomas and cyproterone acetate, needs to be further investigated.

L'Acétate de Cyprotérone Favorise t'il les Méningiomes Multiples ?



S. Froelich*, QT Pham*, N Fontaine*, P Boyer*,
P Kehrli*, D Maitrot*, J Auwerx°, JL Schlienger+

*Service de Neurochirurgie, ° IGBMC, + Service de Médecine Interne
CHU de Strasbourg

SFMI,
Versailles 2010

SFNC, Lyon

EANS, Marseille

Série

9 femmes - 1 homme (33 à 62 ans, moyenne : 46 ans)

2 à 11 méningiomes Base du crâne

Acétate de cyprotérone depuis 10 à 20 ans (50 mg/j)

- Hirsutisme (6 cas)
- Endométriose (1 cas)
- Contraception - Suppression des règles (1 cas)
- Transsexuel (1 cas)
- Ménopause (1 cas)

Méningiomes multiples opérés : 14

Symptômes d'apparition rapide : 6 patients

Suivi radiol. de plus de 5 mois (8 à 81)
AVANT ARRET
7 patients

Augmentation de taille
et/ou apparition de nouveaux méningiomes

Suivi radiol. de plus de 5 mois (5 à 32 , moy : 17)
APRES ARRET
6 patients

Pas d'évolution clinique ou radiologique

Méningiomes et Hormones

- Predominance féminine 2.2:1 (*CITRUS*)
- Accel. de la croissance pendant la grossesse
- Décroissance après l'accouchement
- Association avec le cancer du sein (*Custer et al.*)
- Association avec l'endométriose (*Claus et al.*)
- Association avec les fibromes utérins (*Claus et al.*)
- Expression de PR – Ers dans la dure-mère
- Augmentation de taille et des symptômes pendant la phase lutéale

PR – Ers dans les méningiomes

Valeur Pronostique

PR expression seule → Meilleur pronostique

68%

Absence de PR/ER seul → Plus agressif / Récidive

24% 8%

Progesterone and estrogen receptors: opposing prognostic indicators in meningiomas

J Neurosurg 105:163–173, 2006

SVETLANA PRAVDENKOVA, M.D., PH.D., OSSAMA AL-MEFTY, M.D., JEFFREY SAWYER, PH.D., AND MUHAMMAD HUSAIN, M.D.

Departments of Neurosurgery and Pathology, University of Arkansas for Medical Sciences, Little Rock, Arkansas

Conclusions. The expression of the PR alone in meningiomas signals a favorable clinical and biological outcome. A lack of receptors or the presence of ERs in meningiomas correlates with an accumulation of qualitative and quantitative karyotype abnormalities, a higher proportional involvement of chromosomes 14 and 22 in de novo tumors, and an increasing potential for aggressive clinical behavior, progression, and recurrence of these lesions. Sex hormone receptor status should routinely be studied for its prognostic value, especially in female patients, and should be taken into account in tumor grading. The initial receptor status of a tumor may change in progression or recurrence of tumor.

Etudes epidémiologiques

Benson et al., Michaud et al., Johnson et al., Blitshteym et al., Korkonen et al., Cea Sorino et al., Hatch et al., Lee et al., Jhawar et al., Custer et al., Wigertz et al, Anderson L et al., Fan ZX et al., Shu X et al…….

Faible ou absence de lien
Entre les THS /CO et les méningiomes

Risque X par 2,48 pour les femmes prémenauposées
Risque X par 1,86 pour les femmes menauposées

Jhawar et al, JNS 003

Légère augmentation pour les utilisatrices de CO

Claus et al, JNS, 2013

Meta-analysis

Qi Z-Y et al., Plos one 2013

Utilisation de THS: RR = 1,19 (14 studies)

- Europe RR = 1,29
- Amerique du nord RR = 1,07

Utilisation de CO :Pas d'association (12 studies)

Exogenous hormone use, reproductive factors, and risk of intracranial meningioma in females

Elizabeth B. Claus, M.D., Ph.D.[1,5], Lisa Calvocoressi, Ph.D.[1], Mellisa L. Bondy, Ph.D.[2], Margaret Wrensch, Ph.D.[4], Joseph L. Wiemels, Ph.D.[4], and Joellen M. Schildkraut, Ph.D.[3]

J Neurosurg. 2013 March ; 118(3): 649–656.

Abstract

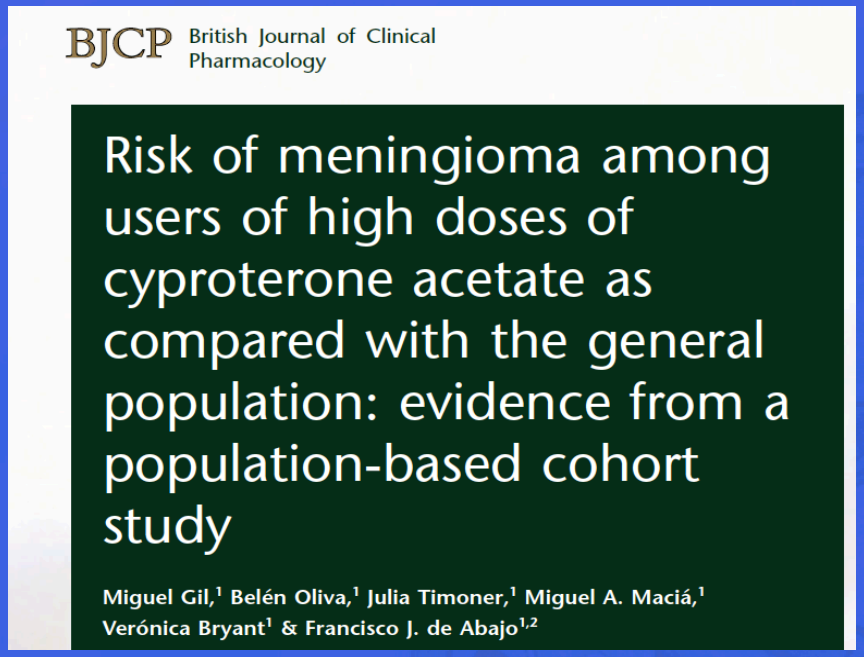
Object—The 2-fold higher incidence of meningioma in women compared with men has long suggested a role for hormonally mediated risk factors, but specific mechanisms remain elusive.

Methods—The study included data obtained in 1127 women 29–79 years of age with intracranial meningioma diagnosed among residents of Connecticut, Massachusetts, North Carolina, the San Francisco Bay Area, and 8 Texas counties between May 1, 2006, and October 6, 2011, and data obtained in 1092 control individuals who were frequency matched for age group and geography with meningioma patients.

Results—No association was observed for age at menarche, age at menopause, or parity and meningioma risk. Women who reported breastfeeding for at least 6 months were at reduced risk of meningioma (OR 0.78, 95% CI 0.63–0.96). A significant positive association existed between meningioma risk and increased body mass index ($p < 0.01$) while a significant negative association existed between meningioma risk and current smoking ($p < 0.01$). Among premenopausal women, current use of oral contraceptives was associated with an increased risk of meningiomas (OR 1.8, 95% CI 1.1–2.9), while current use of hormone replacement therapy among postmenopausal women was not associated with a significant elevation in risk (OR 1.1, 95% CI 0.74–1.67). There was no association between use of fertility medications and meningioma risk.

Y a t'il un rôle ???

- THS versus CO
- Utilisateurs actuels et anciens
- Grande variété des TTT et des associations
- Variété des indications
- Variabilité culturelle
- Variabilité dans le montage des études
- Biais de mémorisation (type de ttt, durée, doses)
- Hétérogénéité des méningiomes
- Méningiomes symptômatiques versus asymptômatiques



Faible puissance
2474 utilisatrices
4 cas de méningiome
2 F, 2 H

Doses élevées d'acétate de cyprotérone (50 mg)

Risque de 11.4 (95% CI 4.3, 30.8)

Cancer Epidemiology 36 (2012) 198–205

Hormonal therapies and meningioma: Is there a link?

Lucía Cea-Soriano[a,*], Tilo Blenk[b], Mari-Ann Wallander[b,c], Luis A. García Rodríguez[a]

[a] Spanish Centre for Pharmacoepidemiologic Research (CEIFE), C/Almirante 28, 2°, 28004 Madrid, Spain
[b] Global Epidemiology, Bayer HealthCare Pharmaceuticals, Berlin, Germany
[c] Department of Public Health and Caring Science, Uppsala University, Sweden

Pas d'influence des CO
No or limited influence of HRT
No influence of CA except in men

MAIS,

- Toutes les femmes exposées ont pris 2 mg par jour Diane.

- L'AdC à 50 mg n'est pas utilisé en Grande Bretagne

Cancer Epidemiology 36 (2012) 198–205

Hormonal therapies and meningioma: Is there a link?

Lucía Cea-Soriano[a,*], Tilo Blenk[b], Mari-Ann Wallander[b,c], Luis A. García Rodríguez[a]

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[b] Global Epidemiology, Bayer HealthCare Pharmaceuticals, Berlin, Germany
[c] Department of Public Health and Caring Science, Uppsala University, Sweden

LCS and LGR work for the Spanish Centre for Pharmacoepidemiologic Research (CEIFE), which has received unrestricted research grants from Bayer HealthCare Pharmaceuticals. TB was an employee of Bayer HealthCare Pharmaceuticals, Berlin, Germany at the time of the study and M-AW is an employee of Bayer AB, Solna, Sweden.

?

Acta Neurochir (2015) 157:1741–1746
DOI 10.1007/s00701-015-2532-3

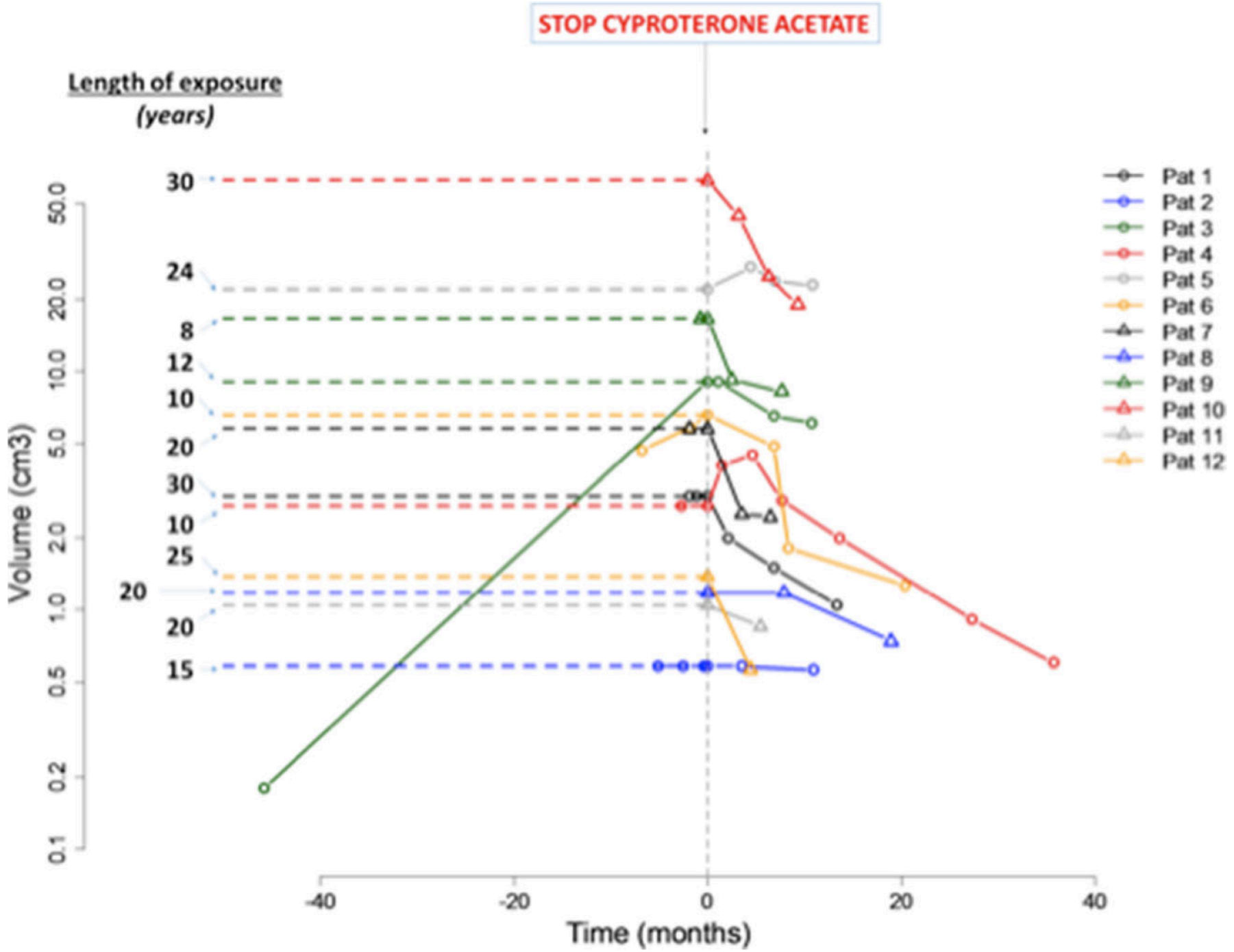
CLINICAL ARTICLE - BRAIN TUMORS

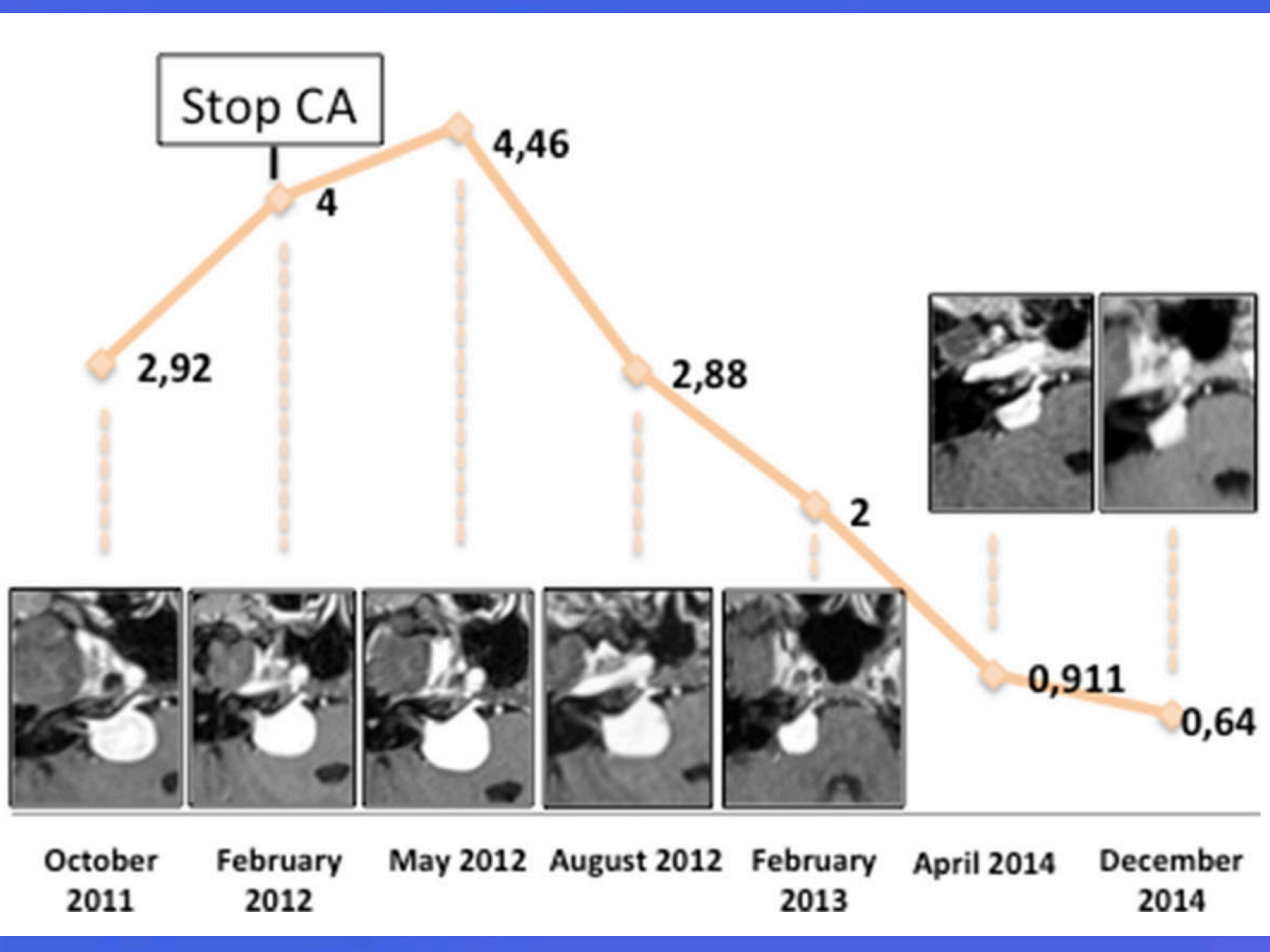
Growth stabilization and regression of meningiomas after discontinuation of cyproterone acetate: a case series of 12 patients

Anne Laure Bernat[1] · Kenichi Oyama[1] · Selma Hamdi[1] · Emmanuel Mandonnet[1,3] · Dominique Vexiau[2] · Marc Pocard[4] · Bernard George[1] · Sebastien Froelich[1]

- 12 femmes sous AdC
- Méningiomes multiples : 11
- Volume : IRM/Logiciel OsiriX® Mac
- MRI/6 mois

Age (years), sex	Symptoms	Indication for CA	Lengh of medication (years)
51, F	Visual loss	Dysmenorrhoea	30
47, F	Visual loss	PCO	15
43, F	Visual loss Headache	Contraception	12
39, F	Headache	Acne	10
61, F	None	Hyperandrogenism	24
38, F	Headache	Acne	10
45, F	Headache	Hyperandrogenism	20
53, F	Headache	Hyperandrogenism	20
56, F	Hypoacusia	Menopause	8
55, F	Aphasia	Hirsutismm	30
49, F	Headache	Alopecia	20
49, F	None	Contraception	25


STOP CYPROTERONE ACETATE
Length of exposure
(years)
30
24
8
12
10
20
30
10
25
20
20
15
Volume (cm3)
50.0
20.0
10.0
5.0
2.0
1.0
0.5
0.2
0.1
-40
-20
0
20
40
Time (months)
Pat 1
Pat 2
Pat 3
Pat 4
Pat 5
Pat 6
Pat 7
Pat 8
Pat 9
Pat 10
Pat 11
Pat 12


Stop CA
2,92
4
4,46
2,88
2
0,911
0,64
October 2011
February 2012
May 2012
August 2012
February 2013
April 2014
December 2014

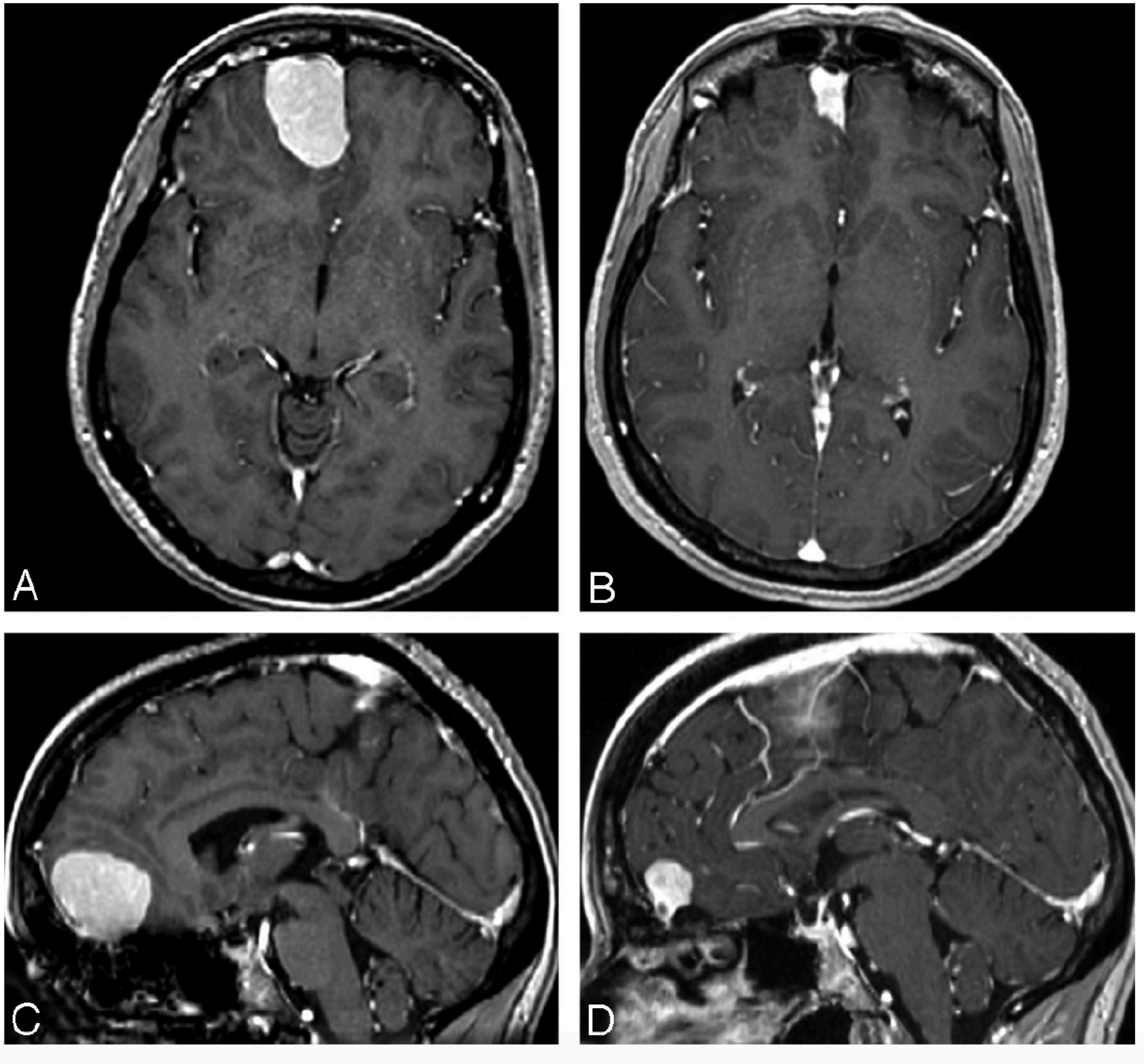
CASE REPORT

A.M.G. Gonçalves
P. Page
V. Domigo
J.-F. Méder
C. Oppenheim

Abrupt Regression of a Meningioma after Discontinuation of Cyproterone Treatment

SUMMARY: The multiplicity of meningiomas or abrupt lesion growth in patients treated with cyproterone acetate suggests that this progestative treatment may promote lesion growth. We report the rapid regression of an incidental meningioma after discontinuation of a 10-year cyproterone acetate treatment. This unique observation suggests that conservative management of meningiomas may be the best option among users of high doses of cyproterone acetate, given that spontaneous regression may occur after hormonal treatment discontinuation.

ABBREVIATIONS: FLAIR = fluid-attenuated inversion recovery


A
B
C
D

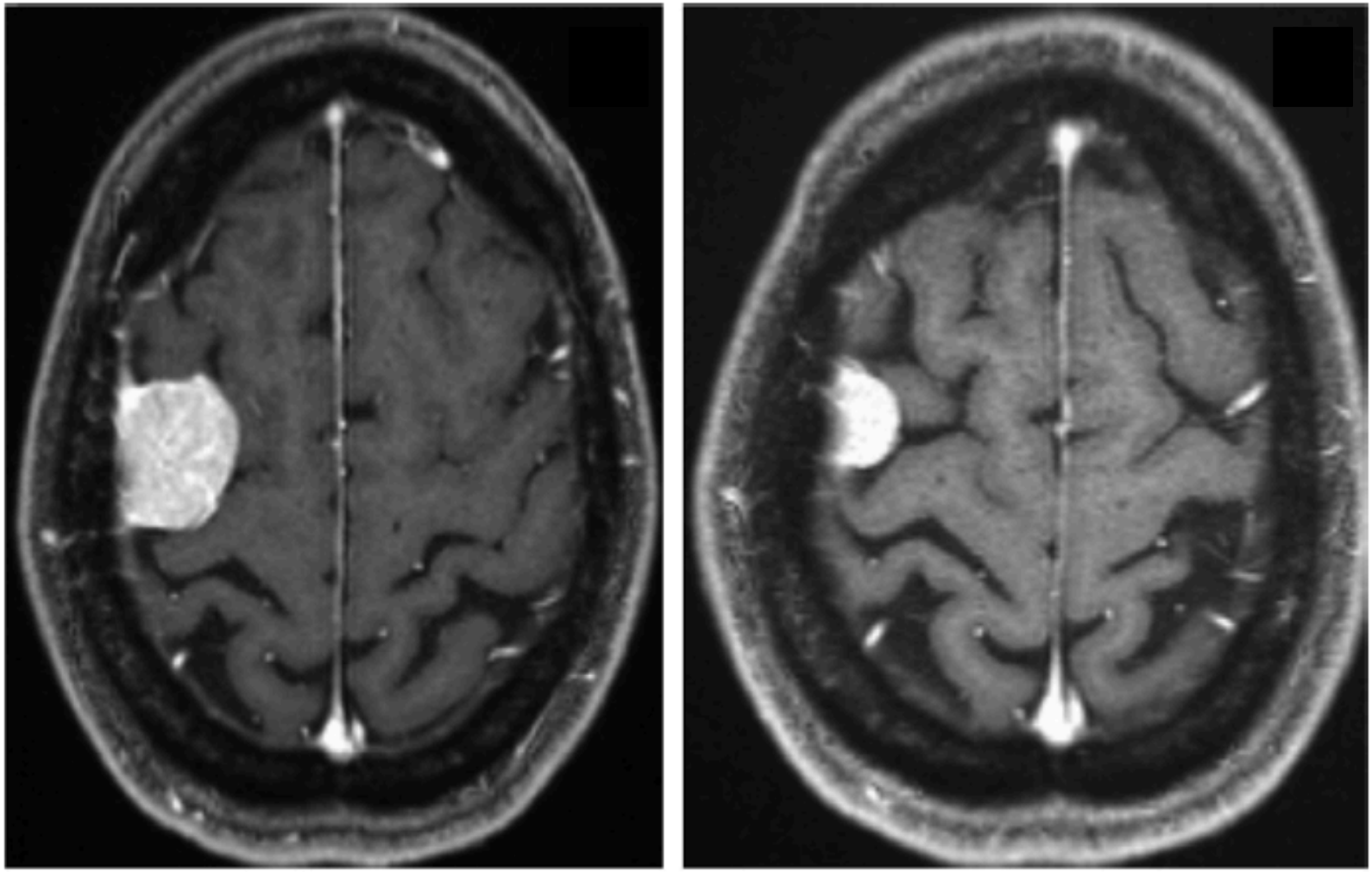
Cas clinique

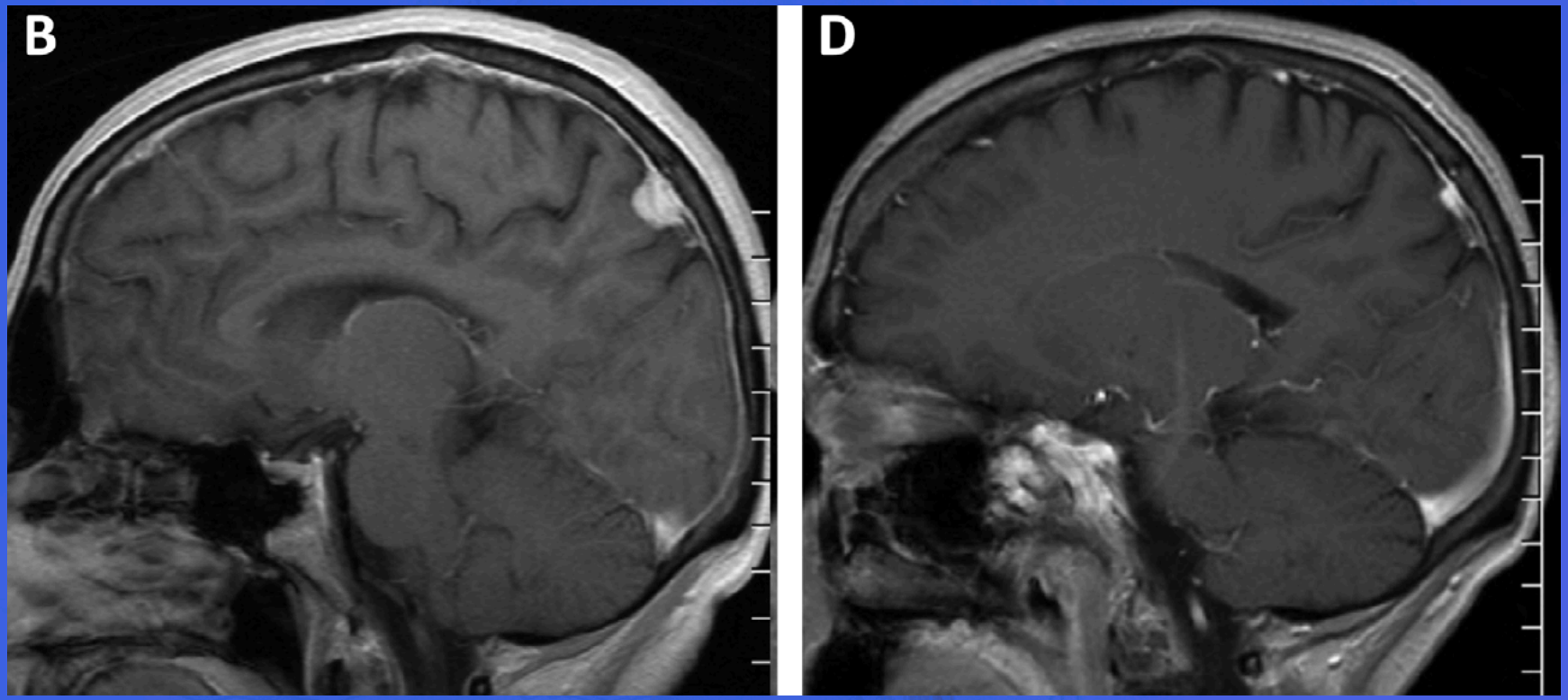
Méningiomes intracrâniens et utilisation prolongée d'acétate de cyprotérone à dose conventionnelle chez la femme : à propos de deux cas de régression tumorale après arrêt du traitement

Intra cranial meningiomas and long term use of cyproterone acetate with a conventional dose in women. A report of two cases of tumor decrease after treatment withdrawal

Neurochirurgie 61 (2015) 339–342

C. Botella [b,*], G. Coll [b], J.-J. Lemaire [a,b], B. Irthum [a,b]




B
D

Case Report

Regression of Giant Olfactory Groove Meningioma and Complete Visual Acuity Recovery after Discontinuation of Cyproterone Acetate

Anne Laure Bernat[1], MD; Sophie Bonnin[2], MD; Moujahed Labidi[1], MD; Nouman Aldahak[1], MD
Damien Bresson[1], MD; Schahrazed Bouazza[1], MD; Sebastien Froelich[1,3], MD, PhD

[1]Department of Neurosurgery, Lariboisière Hospital, Paris, France
[2]Department of Ophthalmology, Lariboisière Hospital, Paris, France
[3]Paris VII-Diderot University, France

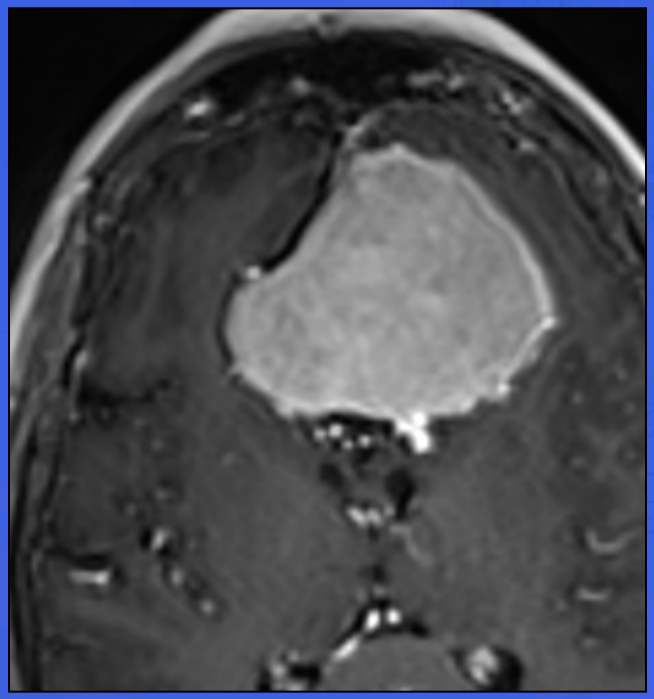
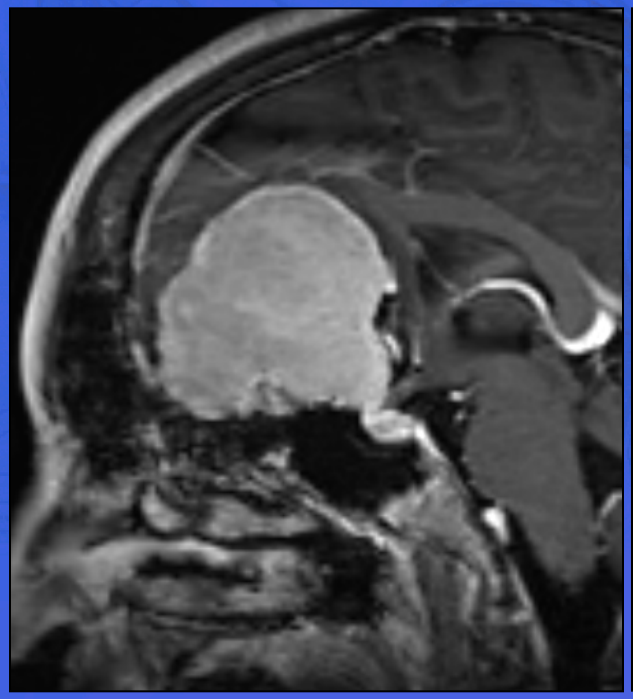
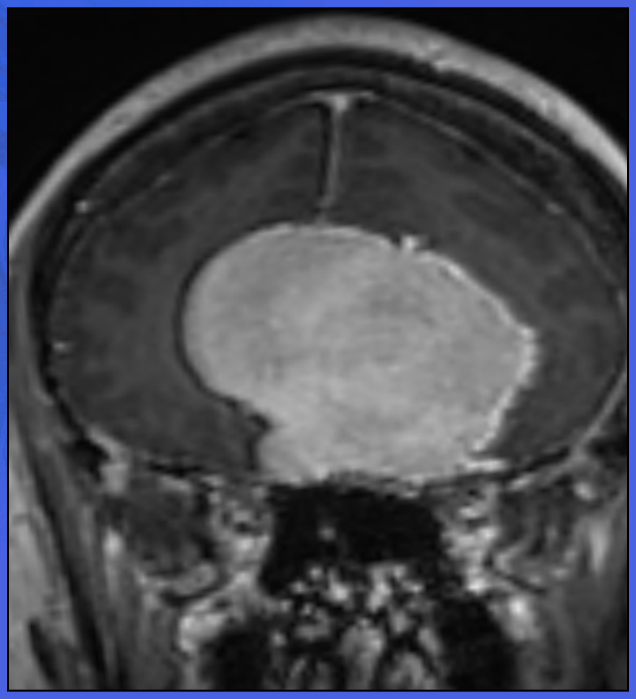
Abstract

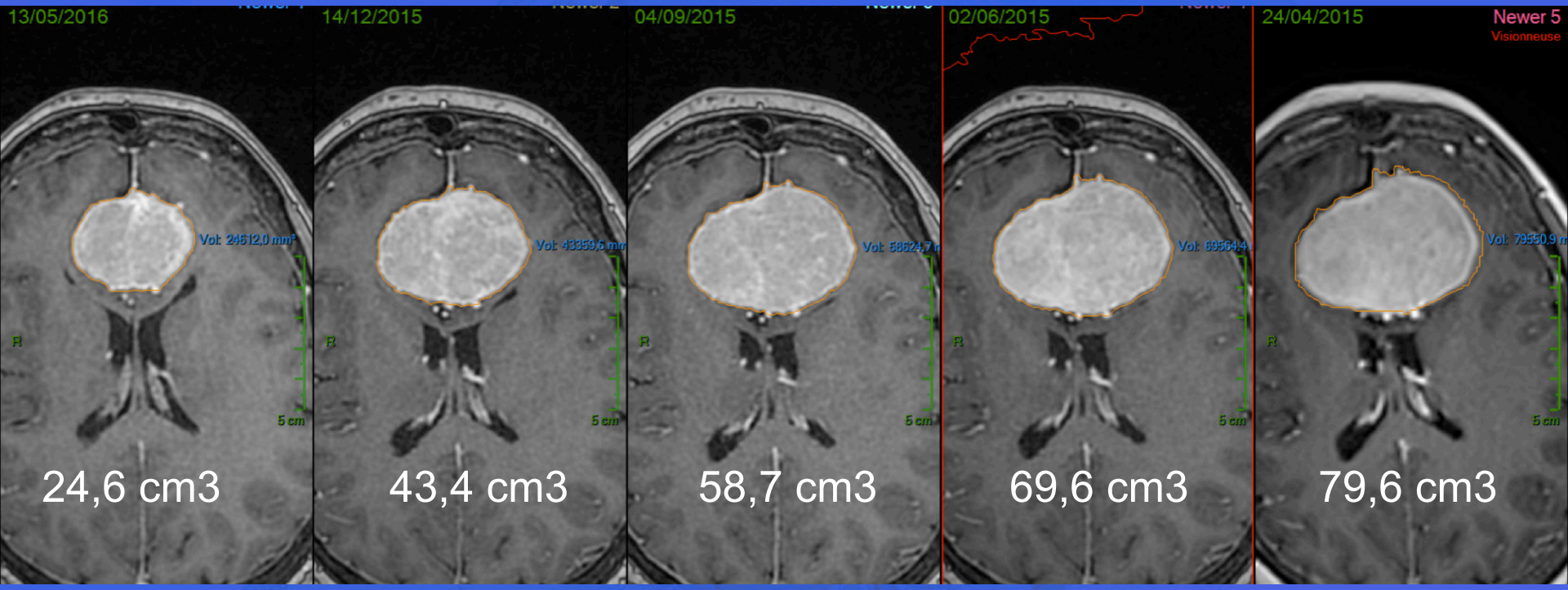
Purpose: To report on the medical management of meningioma with compression of the optic chiasm associated with the use of cyproterone acetate (CA).
Case Report: A 65-year-old woman who was being treated with CA presented with a recent decrease in visual function, leading to discovery of a giant olfactory groove meningioma with compression of the optic chiasm. CA was discontinued immediately, and her visual function improved dramatically. At 13 months, in addition to a significant improvement in visual and neurocognitive symptoms, the tumor volume was reduced by 50%.
Conclusion: In meningiomas associated with CA, treatment cessation may result in prompt improvement in symptoms and a reduction in tumor volume, even if the tumor is large and causing neurologic impairments.

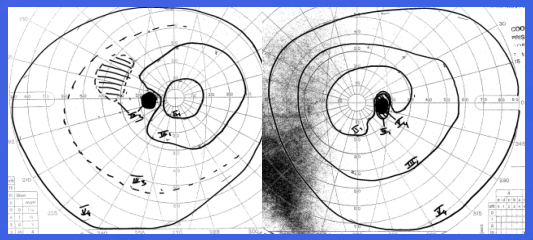
Keywords: Compression; Cyproterone Acetate; Medical Treatment; Meningioma; Optic Apparatus

J Ophthalmic Vis Res 2018; 13 (3): 355-358

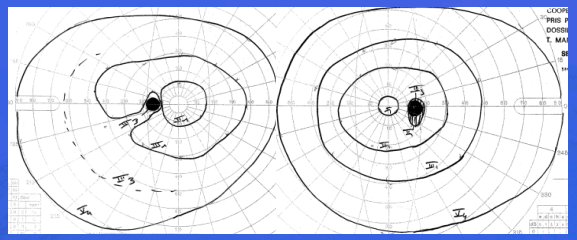
- ✓ Femme de 60 ans
- ✓ Baisse rapide de l'AV (G:5/10 – R:5/10)
- ✓ Syndrome frontal
- ✓ AdC penant 30 ans

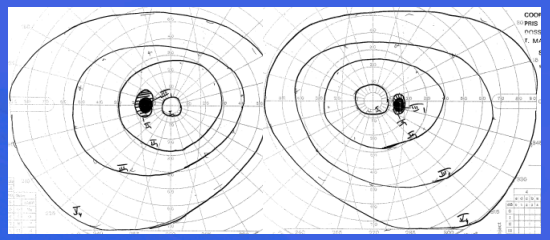

13/05/2016
14/12/2015
04/09/2015
02/06/2015
24/04/2015
Newer 5
Visionneuse
24,6 cm3
43,4 cm3
58,7 cm3
69,6 cm3
79,6 cm3



5/10 5/10



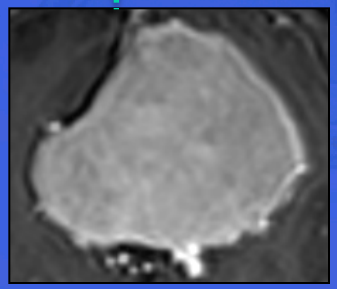
8/10 10/10



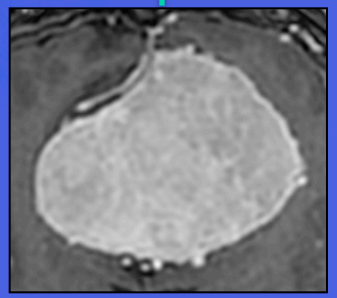
10/10 10/10

Volume
cm 3

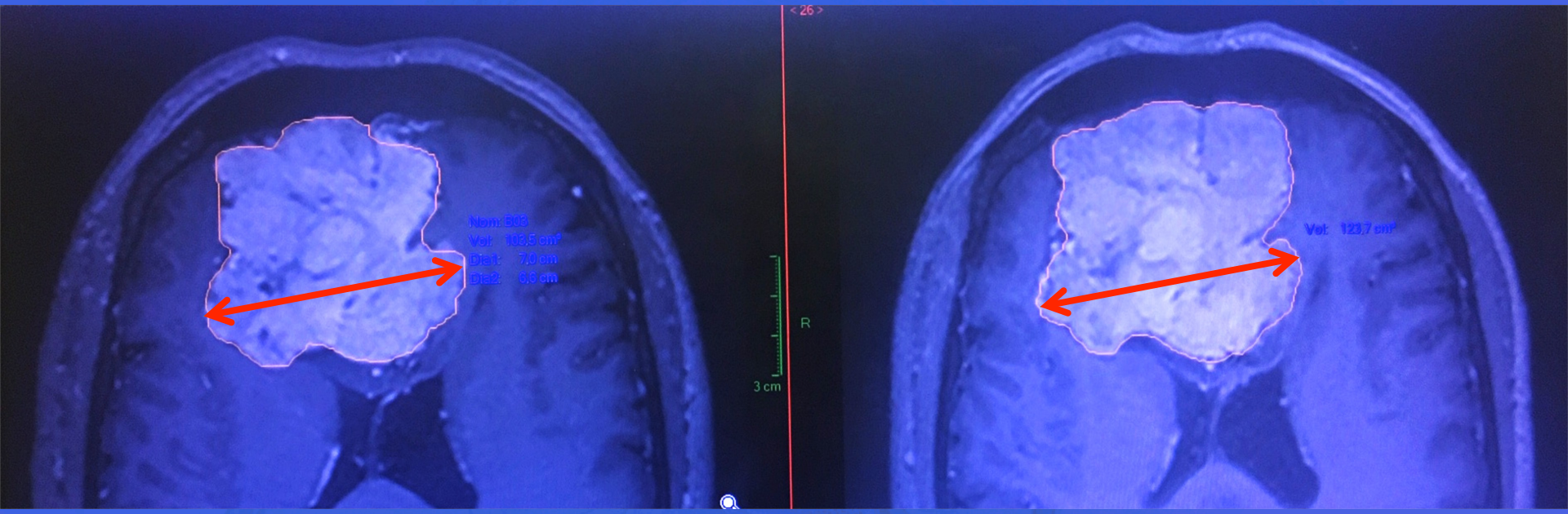
79,5 cm3



69,6 cm3



- Syndrome frontal sévère
- Signes d'HTIC
- Baisse importante de l'AV



Volume : 100 cm3

Volume : 123 cm3

Importance du Volume +++

Journal of Neurosurgical Sciences 2017 February;61(1):98-101

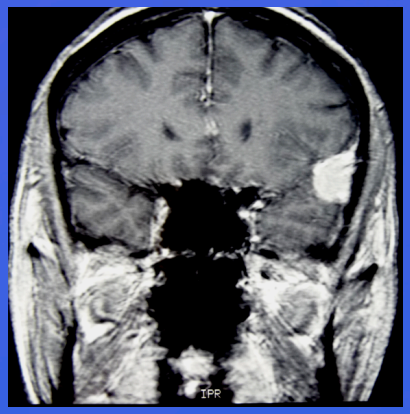
DOI: 10.23736/S0390-5616.16.03243-4

language: English

Close follow-up after discontinuation of cyproterone acetate: a possible option to defer surgery in patients with voluminous intracranial meningioma

Fahed ZAIRI [1], Rabih ABOUKAIS [1], Emilie LE RHUN [1], Paulo MARINHO [1], Claude A. MAURAGE [2], Jean P. LEJEUNE [1] ✉

[1] Department of Neurosurgery, Lille University Hospital, Lille, France; [2] Department of Pathology, Lille University Hospital, Lille, France

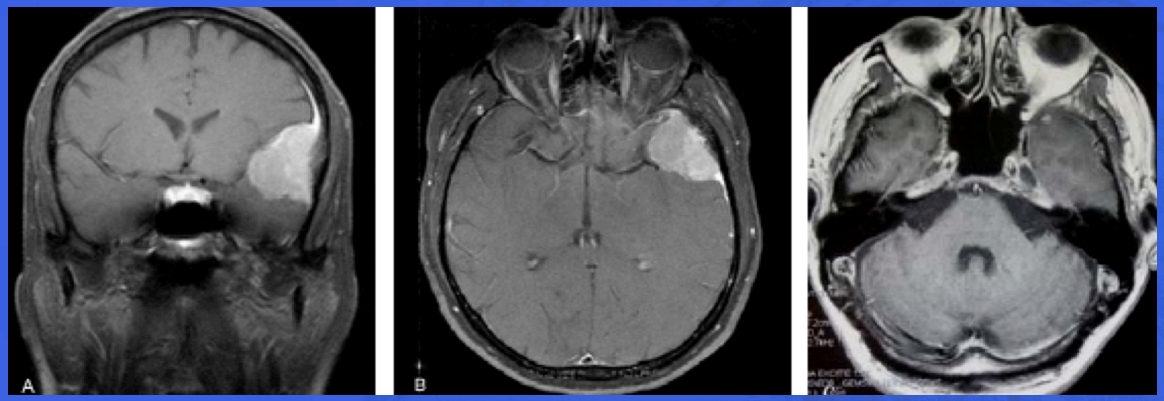


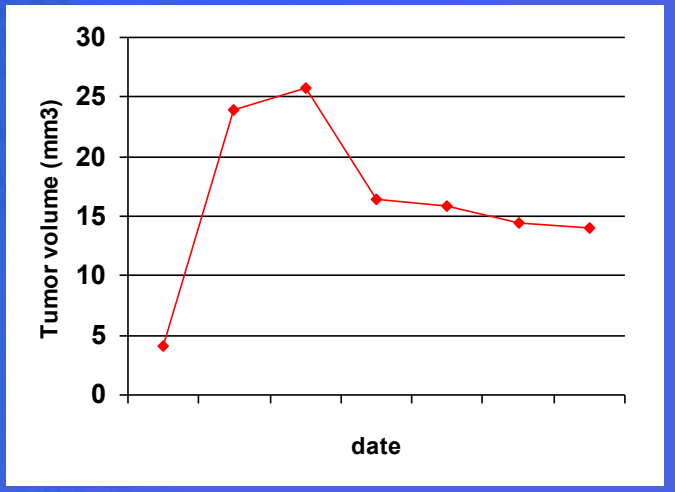
Acta Neurochir (2010) 152:1955–1956
DOI 10.1007/s00701-010-0787-2

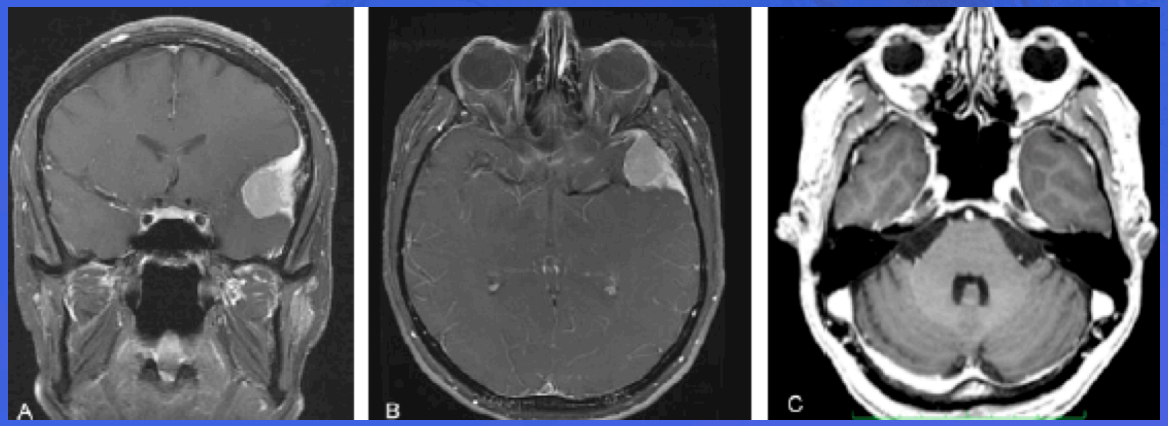
LETTER TO THE EDITOR

Regression of meningiomas after discontinuation of cyproterone acetate in a transsexual patient

Helene Cebula · Trang Q. Pham · Patrick Boyer · Sébastien Froelich





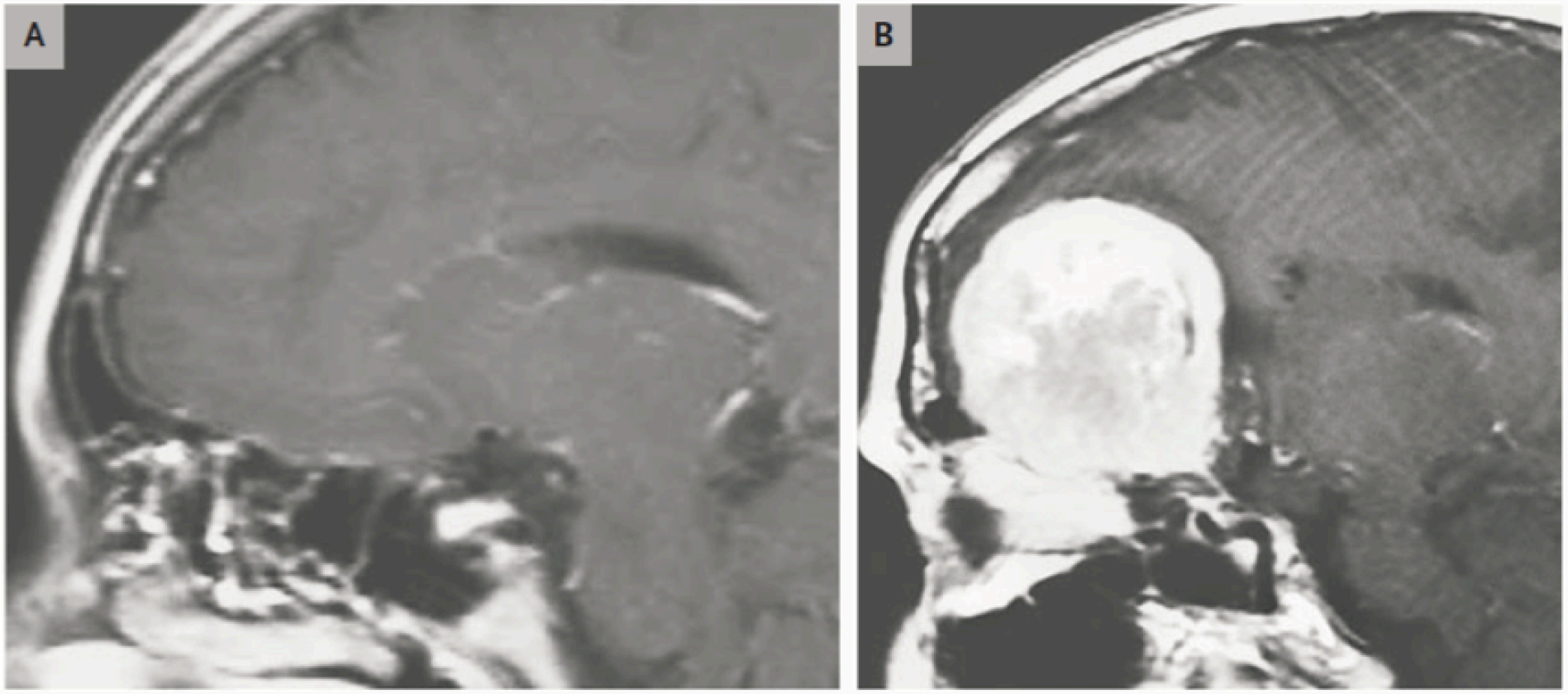


Cebula et al.
Acta Neurochir, 2010

N Engl J Med. 2007 Dec 6;357(23):2411-2.

Growth of a meningioma in a transsexual patient after estrogen-progestin therapy.

Gazzeri R, Galarza M, Gazzeri G.



Symptomatic meningioma induced by cross-sex hormone treatment in a male-to-female transsexual

Marina T. Bergoglio*, Marcelino Gómez-Balaguer, Elena Almonacid Folch, Felipe Hurtado Murillo, Antonio Hernández-Mijares

Department of Endocrinology, Doctor Peset University Hospital, Valencia, Spain

Endocrinol Nutr. 2013;**60(5)**:264–267

Received 11 May 2012; accepted 6 July 2012

Surg Neurol Int. 2018; 9: 109.

Published online 2018 May 25. doi: 10.4103/sni.sni_22_18

PMCID: PMC5991277

PMID: 29930875

Multiple meningiomas in two male-to-female transsexual patients with hormone replacement therapy: A report of two cases and a brief literature review

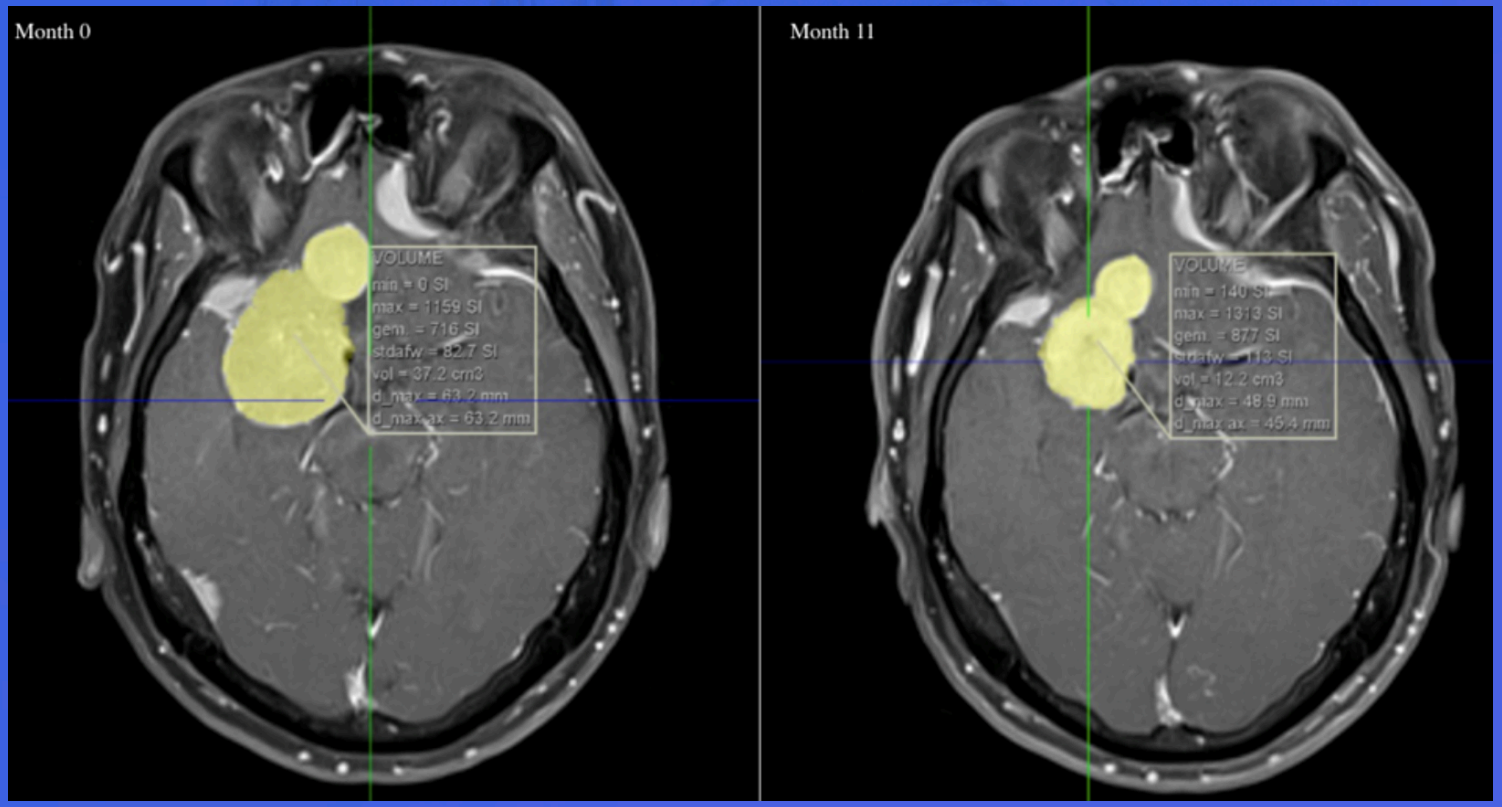
Rahul Raj,* Miikka Korja, Päivi Koroknay-Pál, and Mika Niemelä

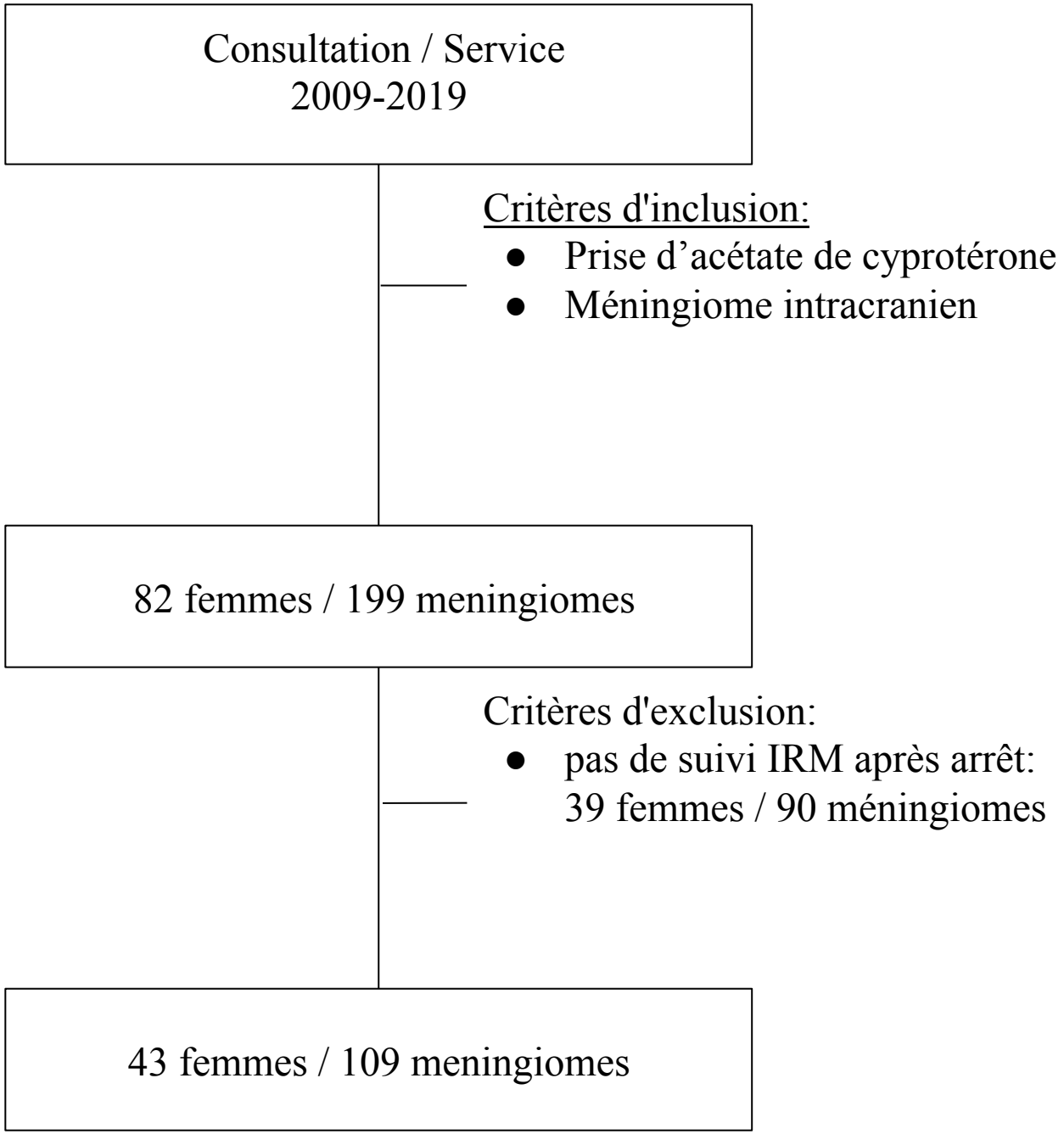
Acetate de Cyprotérone chez l'Homme

GMS Ophthalmol Cases. 2015 Jun 17;5:Doc05. doi: 10.3205/oc000027. eCollection 2015.

Unilateral proptosis and blindness caused by meningioma in a patient treated with cyproterone acetate.

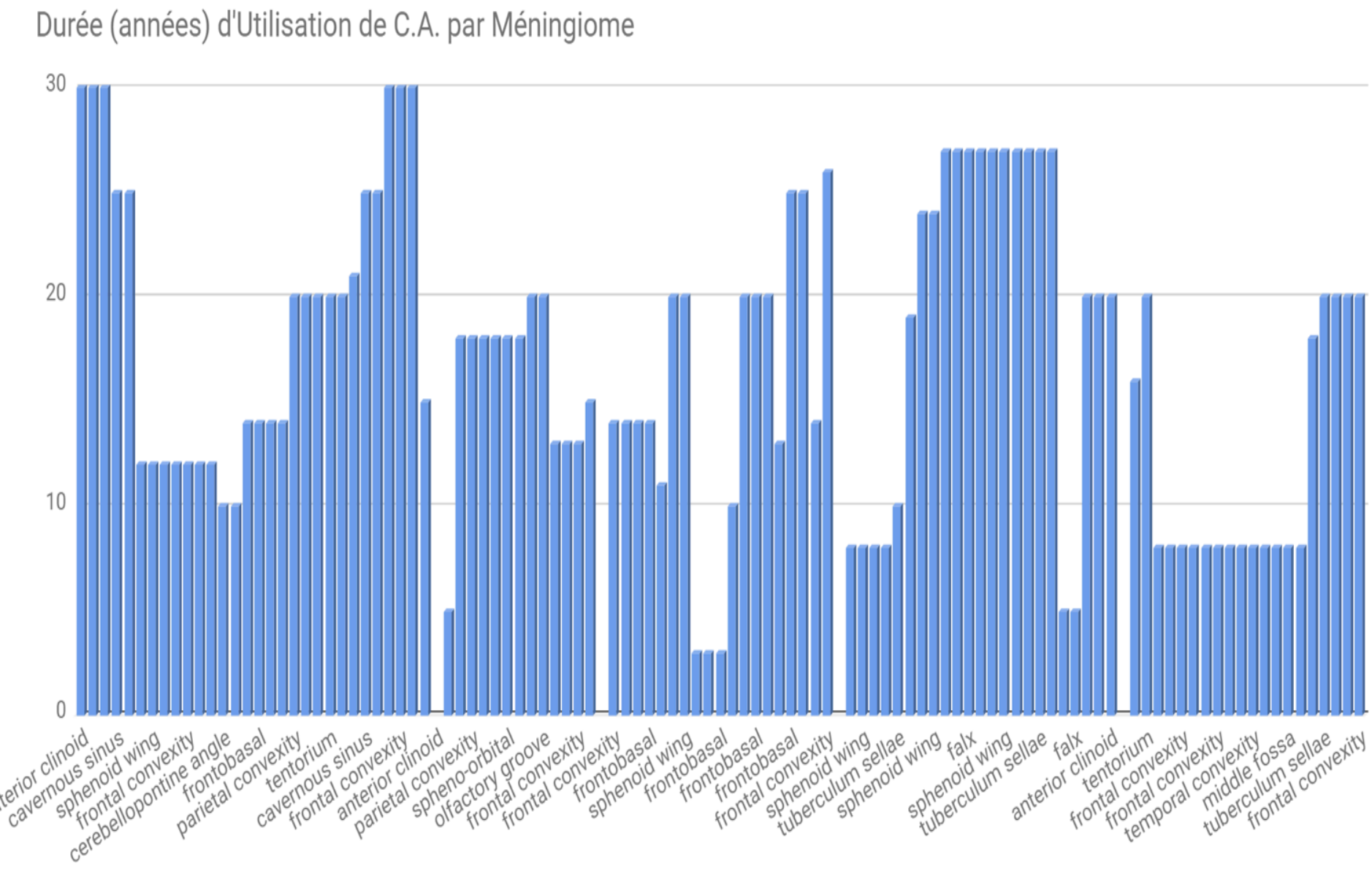
Sys C[1], Kestelyn P[1].




Consultation / Service
2009-2019
Critères d'inclusion:
Prise d'acétate de cyprotérone
Méningiome intracranien
82 femmes / 199 meningiomes
Critères d'exclusion:
pas de suivi IRM après arrêt:
39 femmes / 90 méningiomes
43 femmes / 109 meningiomes

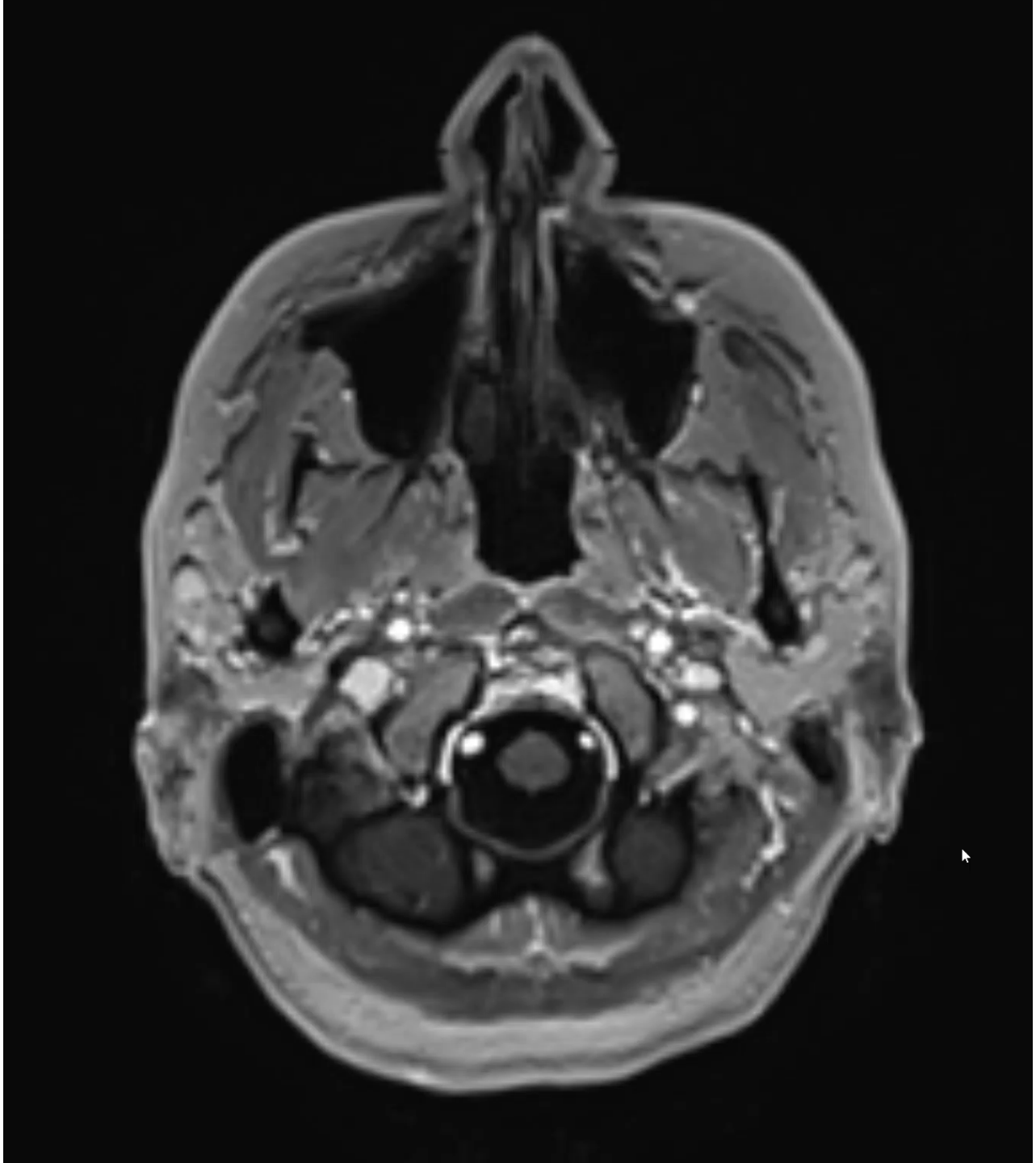
		Moyenne	Dev St	Gamme
Age	(ans)	51,3	6,8	31-65
BMI	(index)	26,3	10,7	19-33
Dose annuelle	(mg)	12464,6	6578,6	6300-27375
Durée	(ans)	16,3	9,2	3-30
Karnofsky initial	(point)	96,6	9,4	70-100
Nombre de méningiomes	(nombre par patient)	2,5	2,4	1-13
Meningiomatose*	(nombre total)	15/43 (35%)		

* définie comme trois méningiomes ou plus

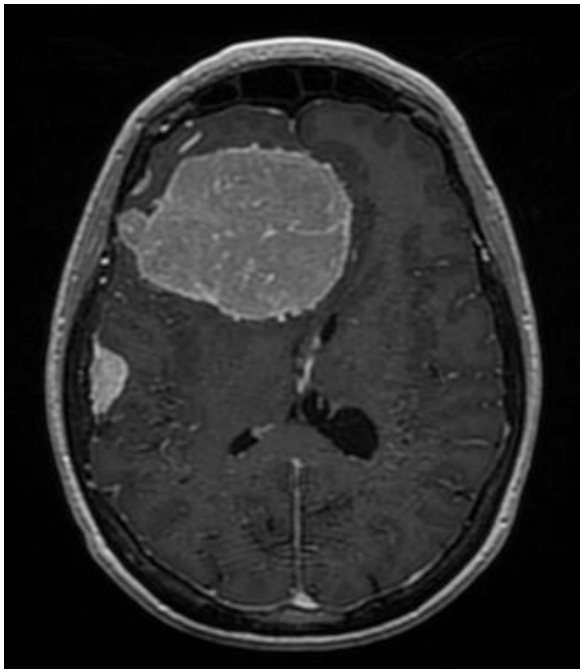

Durée (années) d'Utilisation de C.A. par Méningiome
30
20
10
0
terior clinoid
cavernous sinus
sphenoid wing
frontal convexity
cerebellopontine angle
frontobasal
parietal convexity
tentorium
cavernous sinus
frontal convexity
anterior clinoid
parietal convexity
spheno-orbital
olfactory groove
frontal convexity
frontal convexity
frontobasal
sphenoid wing
frontobasal
frontobasal
frontobasal
frontal convexity
sphenoid wing
tuberculum sellae
sphenoid wing
falx
sphenoid wing
tuberculum sellae
falx
anterior clinoid
tentorium
frontal convexity
frontal convexity
temporal convexity
middle fossa
tuberculum sellae
frontal convexity

Indication C.A.	**#**	**%**
Hyperandrogénie	22	20,2%
Hirsutisme	19	17,4%
Menopause	13	11,9%
Contraception	11	10,1%
Acné	10	9,2%
Chute de cheveux	10	9,2%
SOPK	9	8,3%
Dysménorrhée	4	3,7%
Ovariectomie bilatérale	4	3,7%
Kystes mammaires	3	2,8%
Endométriose	2	1,8%

Localisation	**#**	**%**
Frontal convexity	23	21,1%
Frontobasal	17	15,6%
Sphenoid wing	17	15,6%
Temporal convexity	8	7,3%
Parietal convexity	6	5,5%
Olfactory groove	6	5,5%
Cavernous sinus	5	4,6%
Tuberculum sellae	4	3,7%
Anterior clinoid	3	2,8%
Tentorium	3	2,8%
Spheno-orbital	3	2,8%
Falx	3	2,8%
Middle fossa	3	2,8%
Cerebellopontine angle	1	0,9%
Optic sheet	1	0,9%
Parasaggital	1	0,9%



Patients opérés



7 méningiomes (6,4%) 5 patients

Avant 2014

Indications:

- progression clinique: 6
- progression radiologique: 1

Histologie:

- Type meningothelial, OMS I
- Ki67%: 2,2%
- RP+

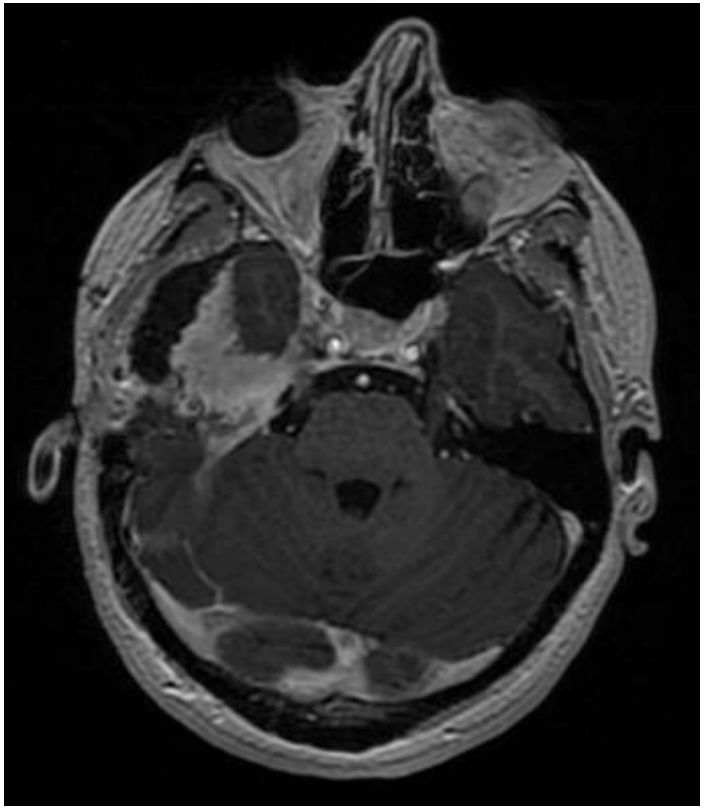
Radiothérapie

1 méningiome (0,9%) - 1 patient

Indication :

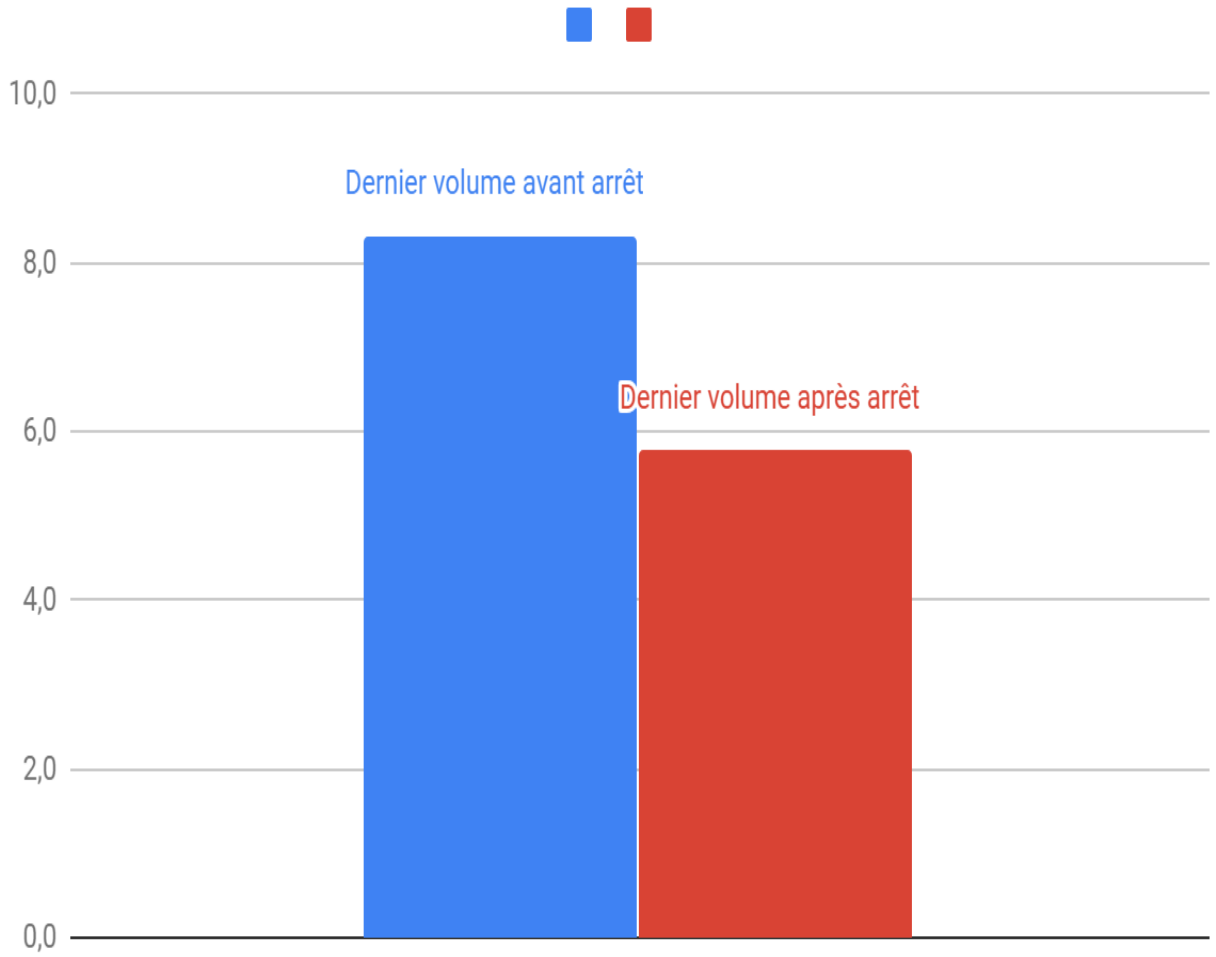
RT postOP

PF progressive



		Moyenne	Median	Dev St	
Suivi	(mois)	47	44	30	2-118
Dernier volume avant arrêt	(cm^3)	8,3	0,6	25	0,01-134,1
Dernier volume après arrêt	(cm^3)	5,8	0,3	14,2	0-103,5
% différence	%	33%	39%		

Changement de Volume Moyen après Arrêt



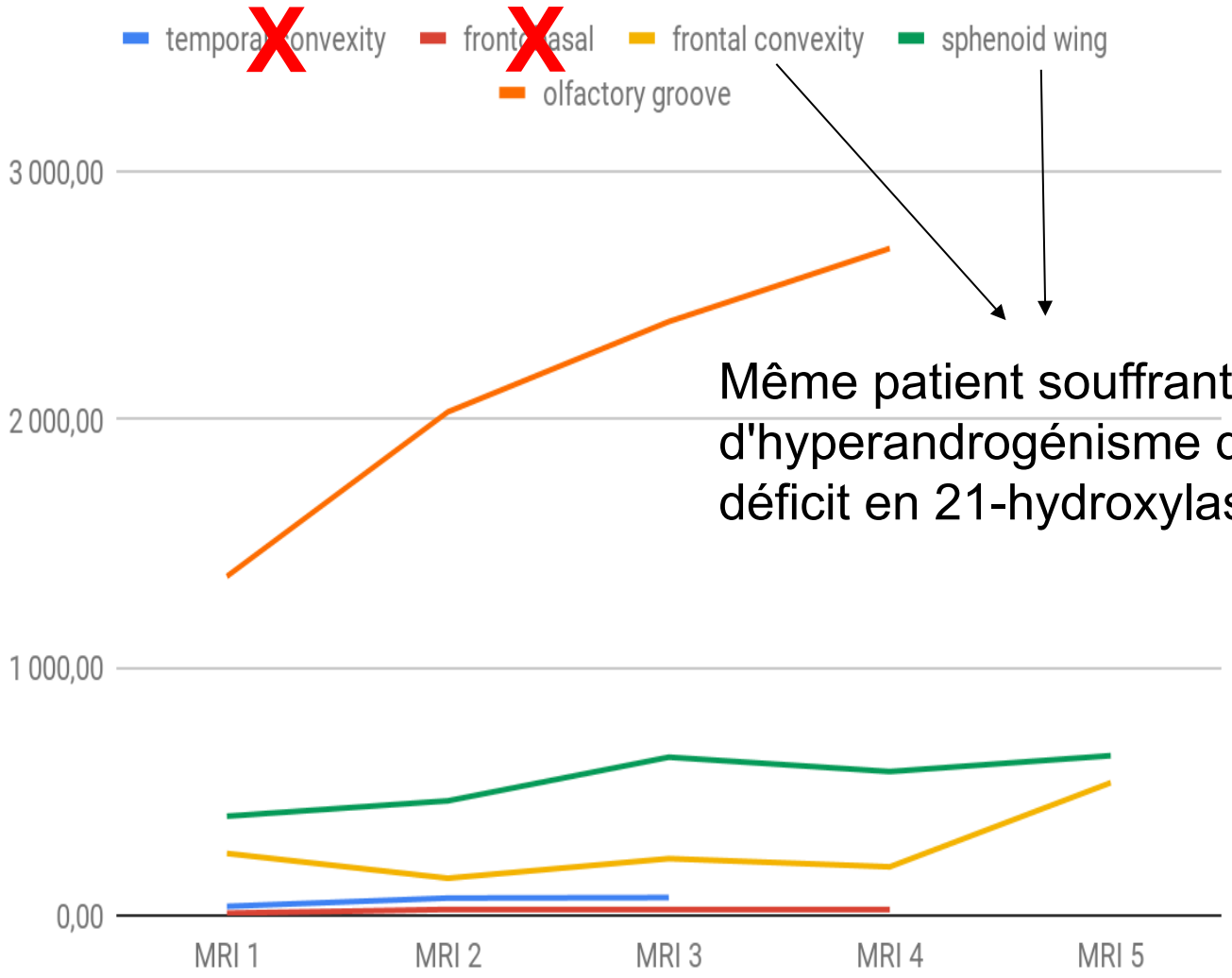
Types de réponse par méningiome

- Régression
  10% de volume en moins par rapport au dernier volume avant arrêt de CA
- Stabilité
  Moins de 10 % de changement de volume après l'arrêt du CA
- Progression
  Plus de 10 % d'augmentation de volume après l'arrêt de CA

Réponse à l'arrêt de l'AdC

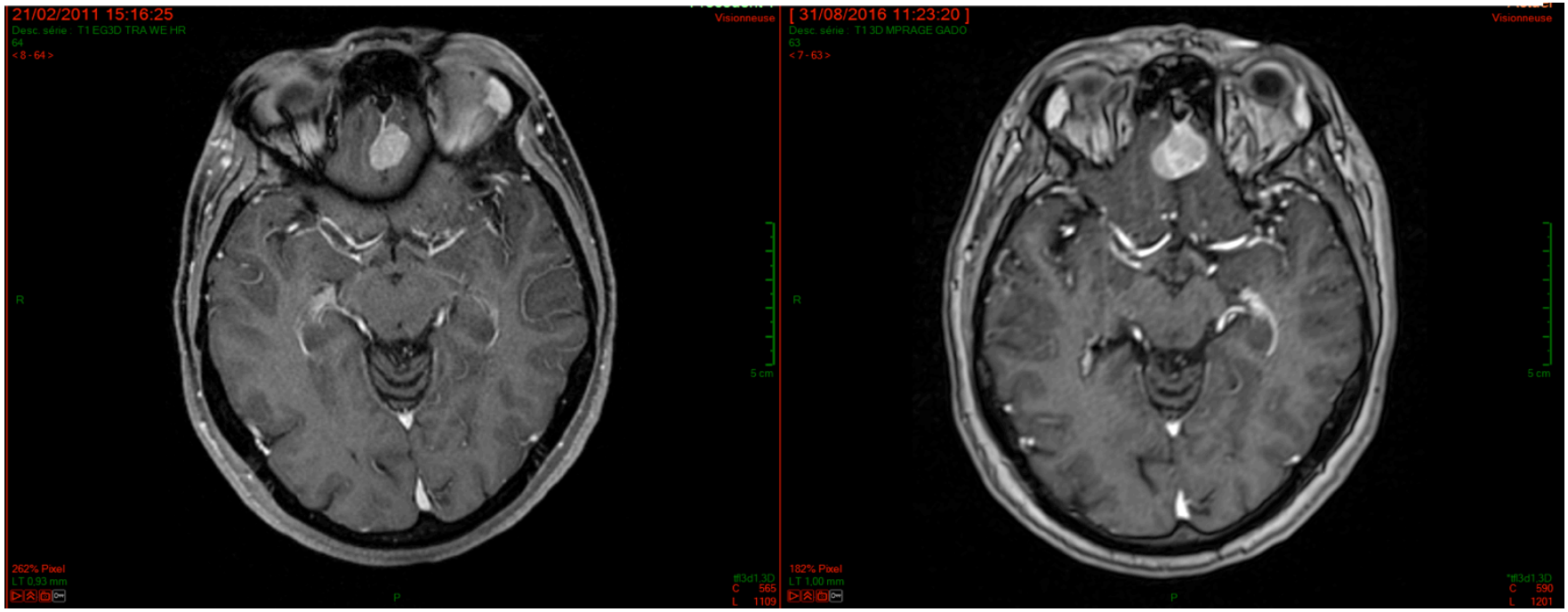
	#	%
Régression	73	72%
Stabilité	24	24%
Progression	5	5%

Méningiomes ayant progressé



Même patient souffrant d'hyperandrogénisme dû à un déficit en 21-hydroxylase

Trés faible volume
Non significatif


21/02/2011 15:16:25
Desc. série : T1 EG3D TRA WE HR
64
< 8 - 64 >
Visionneuse
R
5 cm
262% Pixel
LT 0,93 mm
tf3d1_3D
C 565
L 1109
P
[31/08/2016 11:23:20]
Desc. série : T1 3D MPRAGE GADO
63
< 7 - 63 >
Visionneuse
R
5 cm
182% Pixel
LT 1,00 mm
*tf3d1_3D
C 590
L 1201
P

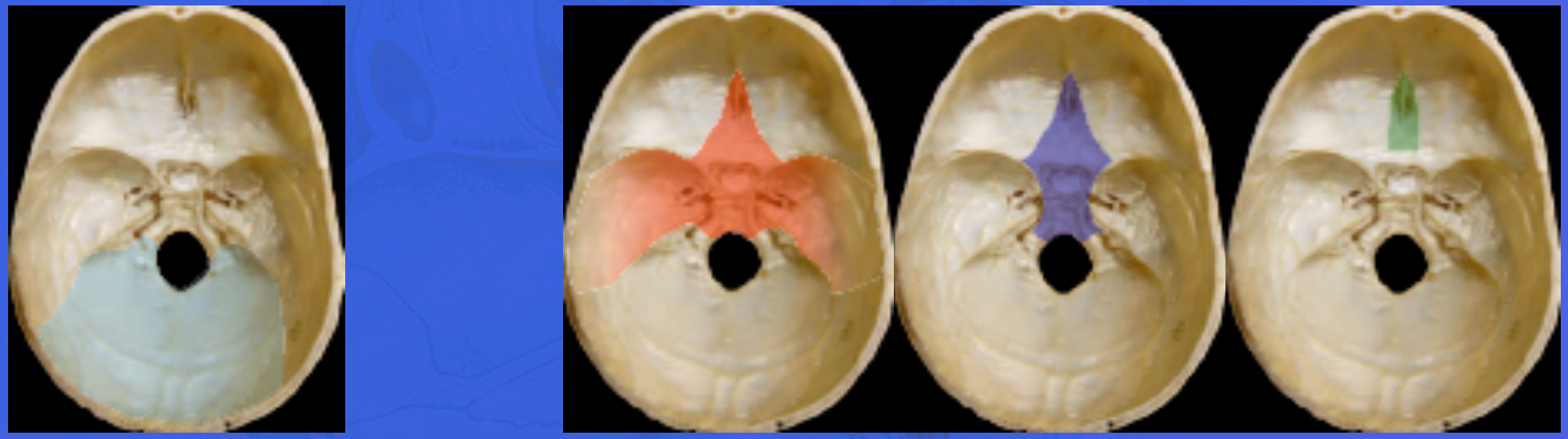
Conclusions

- 97,1 % des méningiomes régressent ou restent stables après l'arrêt du C.A.

- Seulement 3 méningiomes sur 102 (3%) progressent réellement après l'arrêt de l’AdC

Paysage Mutationnel Spécifique

Anterior skull base meningiomas are not NF2-mutant and are almost always benign with chromosomal stability



NF2 **KLF4/TRAF4** **AKT1/TRAF4** **SMO L412F**

Clark et al. *Genomic analysis of non-NF2 meningiomas reveals mutations in TRAF7, KLF4, AKT1, and SMO. Science 2013;339(6123):1077-1080*

Paysage Mutationnel Spécifique

Basal localisation of meningiomas is more frequent during pregnancy (60%) compared to convexity meningiomas

Meningiomas in Pregnancy: A Clinicopathologic Study of 17 Cases

Eriks A. Lusis, MD, Bernd W. Scheithauer, MD, Anthony T. Yachnis, MD, Bernhard R. Fischer, MD, Michael R. Chicoine, MD, Werner Paulus, MD, Arie Perry, MD

Neurosurgery, Volume 71, Issue 5, November 2012, Pages 951–961,
https://doi.org/10.1227/NEU.0b013e31826adf65
Published: 26 July 2012 **Article history** ▾

Paysage Mutationnel Spécifique

- **40 patientes opérées** pour méningiome après un TTT prolongé par progestatif dont 38 sous AdC
- Séquençage pour déchiffrer le paysage mutationnel
- Comparées à 530 femmes avec des méningiomes sans TTT

Multiples	**48%**	**5%**
Base du crâne	**64%**	**50%**
Mutation PIK3CA	**35 %**	**3%**
Mutation TRAF7	**40%**	**26%**
Mutation NF2	**7,5%**	**32%**

Annals of Oncology 2018, M Peyre

Cas de Progression ? Inhabituel

Méningiome présent avant le début du TTT

- Plus souvent unique ?
- Localisation inhabituelle ?
- Accélération de la croissance puis poursuite de la progression après arrêt ?
- Evolution vers un grade II possible ?

Méningiome sous AdC

- Toujours bénin
- Localisation typique
- Régression à l'arrêt

Acta Neurochir (Wien). 2019 Mar;161(3):589-592. doi: 10.1007/s00701-018-03782-4. Epub 2019 Jan 22.

Combined hormonal influence of cyproterone acetate and nomegestrol acetate on meningioma: a case report.

Champagne PO[1,2], Passeri T[3], Froelich S[3].

Author information

Abstract

Cyproterone acetate (CPA) is an antiandrogenic drug which has recently been recognized to promote the occurrence and growth of intracranial meningiomas. Nomegestrol acetate (NOMAC) is a widely used progestin-like drug that could be suggested as an alternative for patients taking CPA. We report a case of CPA-related meningioma for which relay from CPA to NOMAC led to further tumor growth and cessation of NOMAC-induced tumor shrinkage. We suggest NOMAC can have a similar effect than CPA on meningiomas. The use of NOMAC as replacement for CPA in the presence of a meningioma should be discouraged until further evidence becomes available on the role of NOMAC in such instances.

Conclusions

- Méningiomes « médicamenteux »
- Nécessité d'un encadrement du TTT par AdC
- En cas de méningiomes, arrêt du TTT et **surveillance**
- Analyse des données de pharmacovigilance en cours
- Nombreuses questions sans réponses
- Autres progestatifs ? Lutenyl – Luteran

Merci

- Dr Anne Laure Bernat, Neurochirurgie, LRB
- Pr Henri Dufour, Marseille
- Dr Alain Weill, CNAM, Dr Joel Coste, CNAM
- Dr Isabelle Yoldjian, ANSM
- Dr Sylvie Fontanel, ARS, Alsace
- Dr Dominique Vexiau, LRB
- …..