

南區頭痛讀書會

2010-10-31

嘉義基督教醫院

神經內科

吳啓順醫師

Patient Profile

- Name: 張王□□
- Age: 68 y/o
- Sex: Female
- Date of hospitalization:
2010-06-10 --- 2010-06-21

Chief Complaint

- Chronic right temporal throbbing headache for more than 6 months

Present illness

- She began to have right temporal throbbing headache since 2009-10.
- Severity: moderate to severe
- Frequency: nearly daily, several times/day
- Duration: 30min to 2hrs/attack
- Nausea/Vomiting: (+)
- Associated S/S: right eye tearing and redness
- S/S aggravated since 2010-04

Past History

- Hypertension(+)
- Type 2 DM(+)
- Hyperlipidemia(+)
- Smoking(-)/Alcohol(-)
- Drug allergy(-)

Neurological Examination

- Cons: clear
- High cortical function: intact
- Cranial Nerve: Normal
- MP: 5 / 5 TR: symmetric Babinski sign:-/-
- Sensory: symmetric and intact
- Cerebellar sign: (-)
- EPS :tremor(-), rigidity(-), bradykinesia(-)
- Gait: fair
- Sphincter function: OK

Neurological Examination

- Bilateral temporal artery pulse: + / +
- Right eye conjunctiva and sclera congestion with tearing while headache attack.

Lab data

0301	CBC	全套血液檢查				
0305	WBC	白血球計數		8.39	3.5~9.9	$\times 10^3/u$
0304	RBC	紅血球計數	H	5.96	4.2~5.4	$\times 10^6/u$
0306	Hb	血色素		12.5	12~16	g/dl
0307	Ht	血球容積比		38.3	37~47	%
0307A	MCV	平均紅血球容積	L	64.3	81~99	f1
0307B	MCH	平均紅血球血色素	L	21.0	27~31	pg
0307C	MCHC	平均紅血球血色素	L	32.6	33~37	g/dl
0308	Platelet	血小板計數		230	130~400	$\times 10^3/u$
0301C	RDW-SD	紅血球分佈寬	L	33.0	38~48	f1
0301B	RDW-CV	紅血球分佈寬		14.3	12~17	%
0301E	MPV	平均血小板容積		10.4	9~13	f1
0303	WBC DC	白血球分類				
0303G	Segment	分葉細胞		59.1	50~65	%
0303H	Lymphocyte	淋巴球		32.1	20~40	%
0303I	Monocyte	單核球		6.0	4~8	%
0303J	Eosinophil	嗜酸性球		2.3	1~3	%
0303K	Basophil	嗜鹼性球		0.5	0~1	%

Lab data

診斷 1 : 頭痛

診斷 2 :

代號	項目名稱	H/L	檢	值	參考	值	單位
0415	GOT 麩胺酸苯醋酸轉胺		19		8~38		U/L
0416	GPT 麩胺酸丙酮酸轉胺		12		4~44		U/L
0420B	BUN(B) 尿素氮		14.8		8~23		mg/dl
0421B	Creatinine(B) 肌酸酐		1.0		0.7~1.5		mg/dl
0426B	Na (B) 鈉		138		135~150		mmol/L
0427B	K (B) 鉀		3.89		3.5~5		mmol/L
0430	Glucose P.C. 飯後血糖	H	212		75~140		mg/dl

簽收時間: 葉雅蓉 099/06/07 10:05:17 列印時間: 吳啓順 099/10/29 16:24:53

0448	HbA1c 糖化血色素	H	7.4		4~6		%
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簽收時間: 葉雅蓉 099/06/12 07:16:47 列印時間: 吳啓順 099/10/29 16:26:47

診斷 1 : 頭痛

診斷 2 : 第二型或未明示型糖尿病未提及併

診斷 3 : 本態性高血壓

診斷 4 :

代號	項目名稱	H/L	檢	值	參考	值	單位
0317	ESR 紅血球沈降速度		17		0~20		mm/hr

簽收時間: 葉雅蓉 099/06/11 09:02:14 列印時間: 吳啓順 099/09/24 18:57:11

報告時間: 陳美榆 099/06/11 10:20:29

Trigeminal autonomic cephalalgias

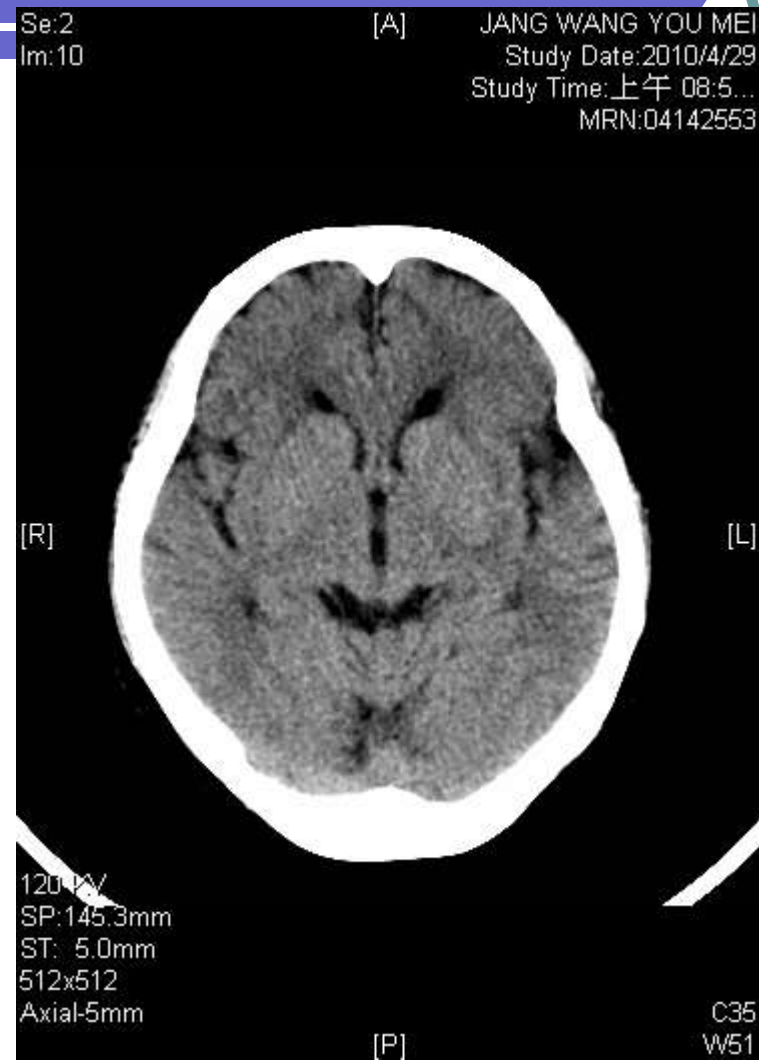
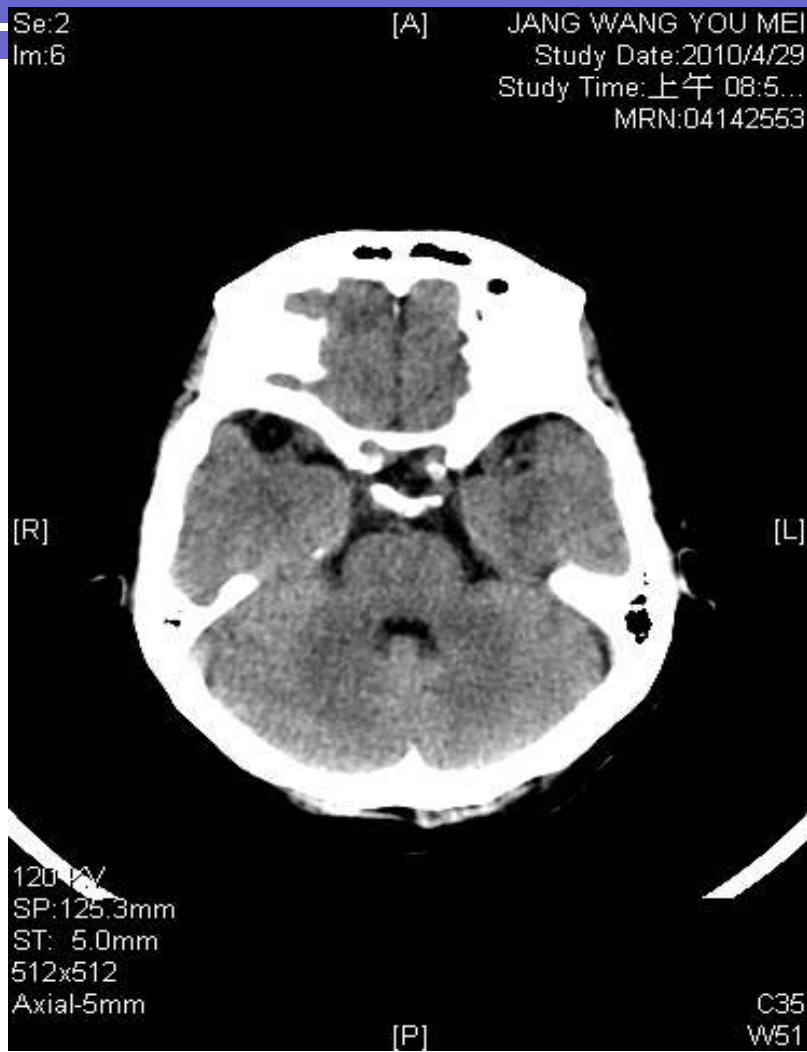
- The trigeminal autonomic cephalalgias (TACs) are a group of **primary headache disorders** characterized by
 1. Unilateral trigeminal distribution pain
 2. Occurs in association with ipsilateral cranial autonomic features

Differential Diagnosis

Clinical features of the trigeminal autonomic cephalalgias

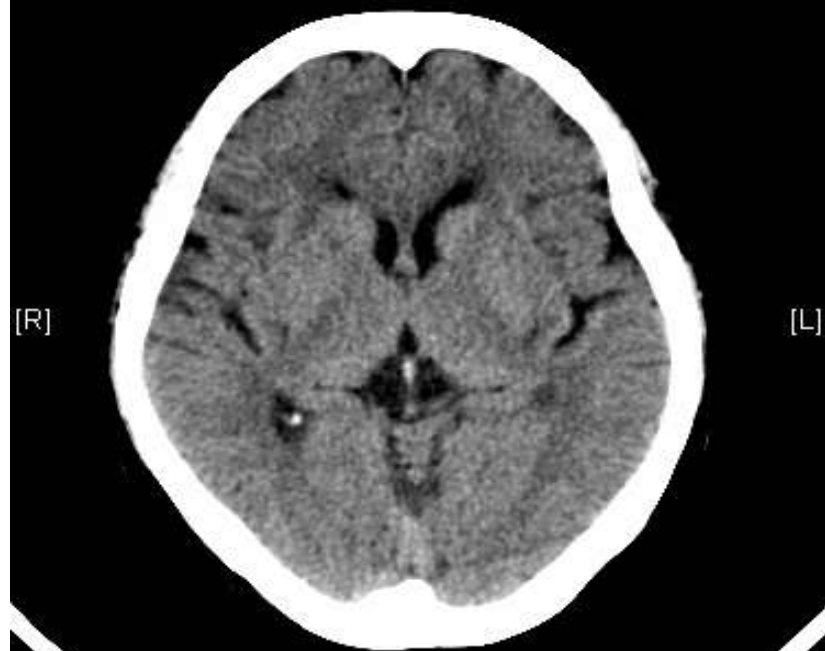
	Cluster headache	Paroxysmal hemicrania	SUNCT
Sex (female:male)	1:3 to 1:7	1:1 to 2.7:1	1:1.5
Pain			
Type	Stabbing, boring	Sharp, stabbing, throbbing	Burning, stabbing, sharp
Severity	Excruciating	Excruciating	Severe to excruciating
Site	Orbit, temple	Orbit, temple	Periorbital
Attack frequency	1 every other day to 8 per day	1 to 40 a day (>5 per day for more than half the time)	3 to 200 per day
Duration of attack	15 to 180 minutes	2 to 30 minutes	5 to 240 seconds
Autonomic features	Yes	Yes	Yes (prominent conjunctival injection and lacrimation)
Migrainous features (nausea, photophobia or phonophobia)	Yes	Yes	Rare
Alcohol trigger	Yes	Occasional	No
Cutaneous triggers	No	Rare	Yes
Indomethacin effect	None	Absolute	None
Abortive treatment	Sumatriptan injection or nasal spray Oxygen	Nil	Nil
Prophylactic treatment	Verapamil Methysergide Lithium	Indomethacin	Lamotrigine Topiramate Gabapentin

Non-Contrast Brain CT(2010-04-29)



Non-Contrast Brain CT(2010-04-29)

Se:2 [A] JANG WANG YOU MEI
Im:11 Study Date:2010/4/29
Study Time:上午 08:5...
MRN:04142553

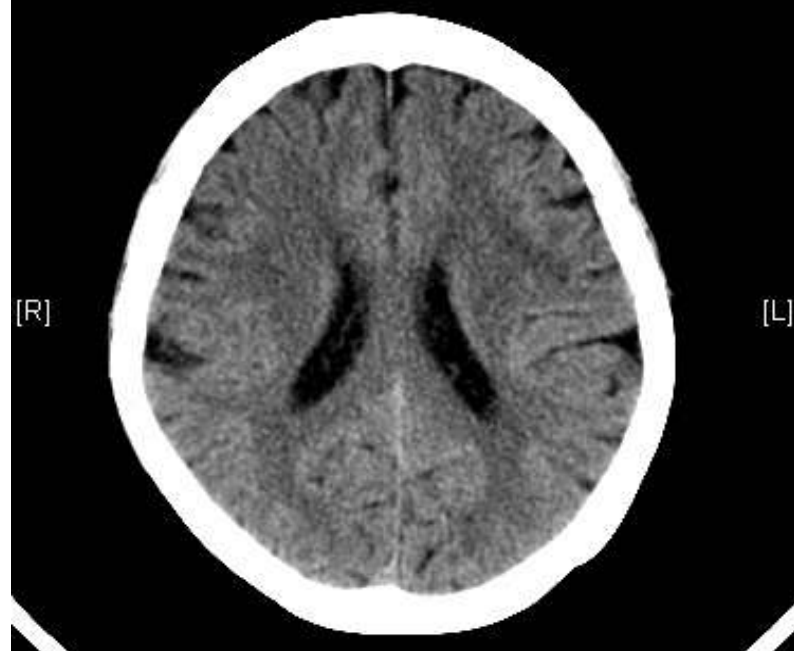


120 kV
SP:150.3mm
ST: 5.0mm
512x512
Axial-5mm

C35
W51

[P]

Se:2 [A] JANG WANG YOU MEI
Im:14 Study Date:2010/4/29
Study Time:上午 08:5...
MRN:04142553



120 kV
SP:165.3mm
ST: 5.0mm
512x512
Axial-5mm

C35
W51

[P]

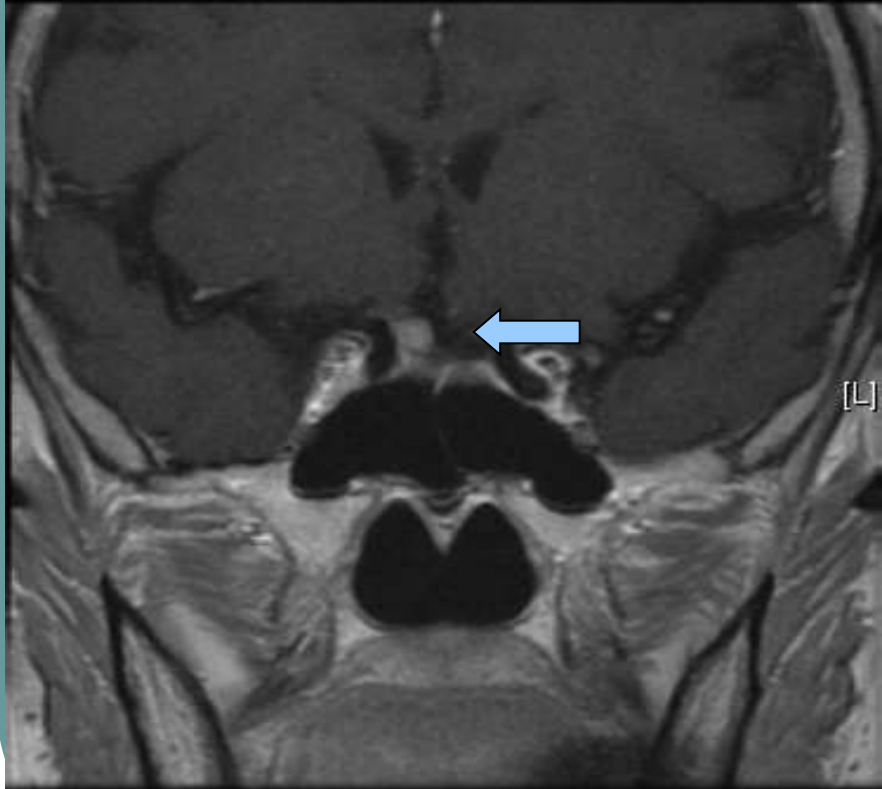
Treatment Course

- Oral indomethacin trial
 - Fail to relieve headache with dose up to indomethacin(50) 2# tid po
- 100% O2 inhalation therapy
 - No obvious effect to relieve acute headache attack
- ◆ Partial response to oral Prednisolone 45mg/day
- ◆ Arrange brain MRI/MRA study to rule out structural lesion.

Brain MRI/MRA with enhancement

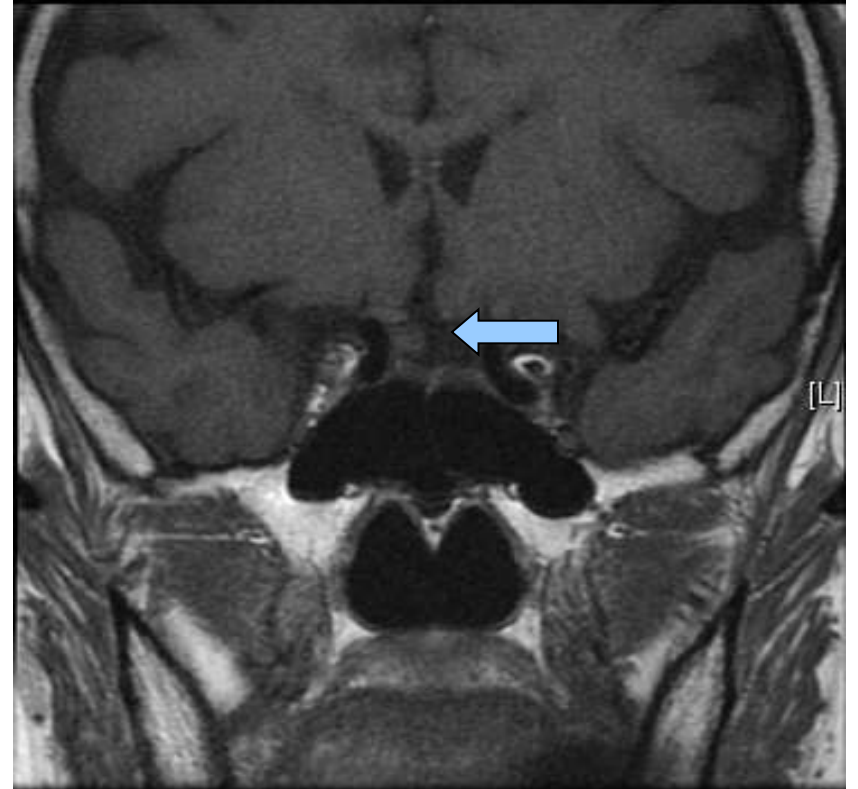
2010-06-17

Se:16 [H] JANG WANG YOU MEI
Im:3 Study Date:2010/6/17
Study Time:上午 09:4...
MRN:04142553



Cor SE T1+C C2538
Yes gd+ W5317 [F]

Se:13 [H] JANG WANG YOU MEI
Im:3 Study Date:2010/6/17
Study Time:上午 09:4...
MRN:04142553



Cor SE T1 C1700
W3378 [F]

Brain MRI/MRA with enhancement

2010-06-17

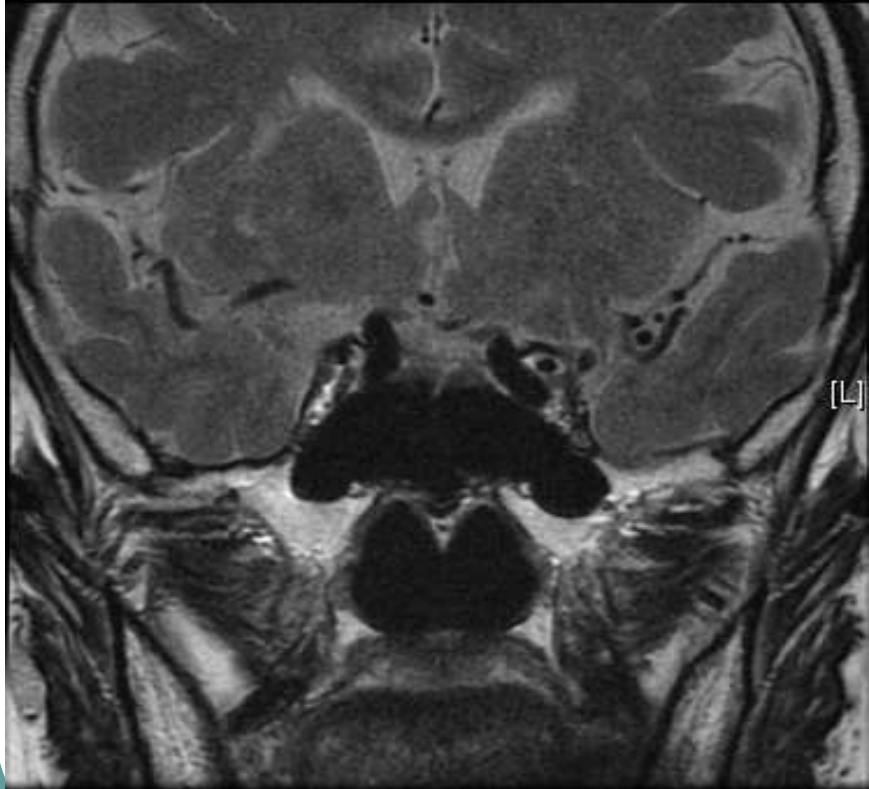


Brain MRI/MRA with enhancement

2010-06-17

Se:12 [H] JANG WANG YOU MEI Study Date:2010/6/17 Study Time:上午 09:4... MRN:04142553
Im:3

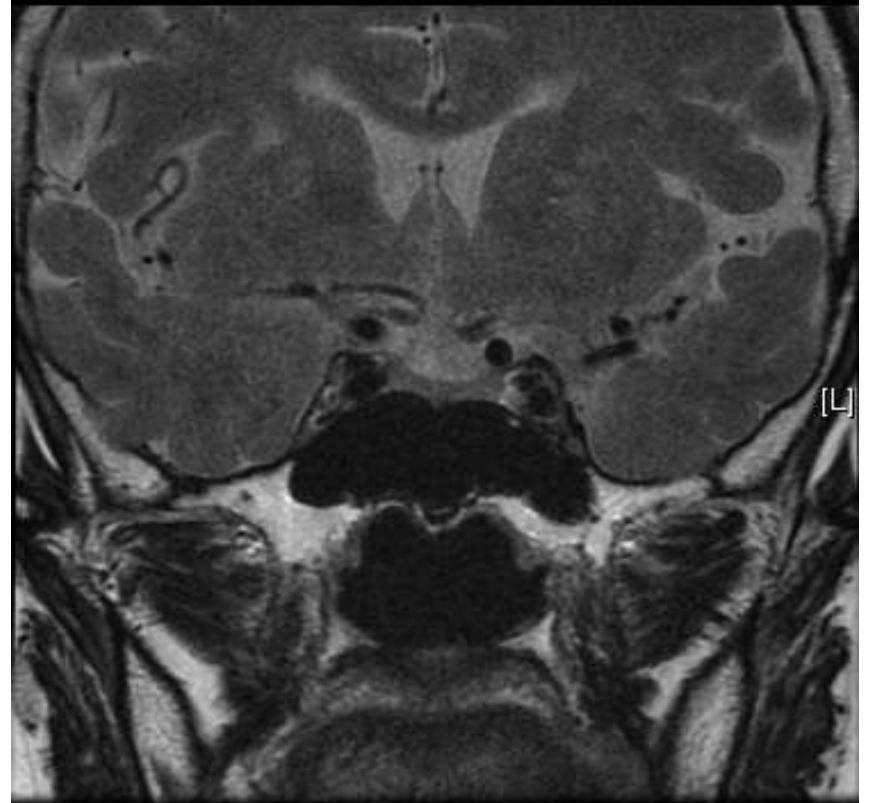
Se:12 [H] JANG WANG YOU MEI Study Date:2010/6/17 Study Time:上午 09:4... MRN:04142553
Im:4



Cor FSE T2

[F]

C1663
W3195



Cor FSE T2

[F]

C1663
W3195

Brain MRI/MRA with enhancement(2010-06-17)

Se:5
Im:4

[HA]

JANG WANG YOU MEI
Study Date:2010/6/17
Study Time:上午 09:4...
MRN:04142553



[L]

MIP I-S

[FP]

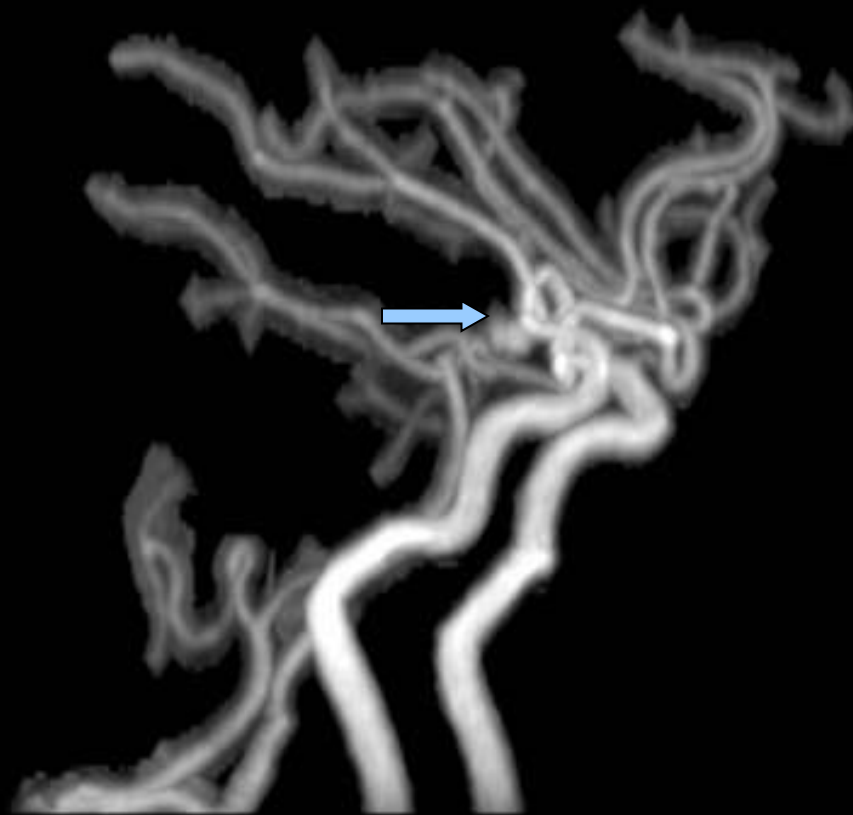
C243
W482

Brain MRI/MRA with enhancement(2010-06-17)

Se:4
Im:7

[H]

JANG WANG YOU MEI
Study Date:2010/6/17
Study Time:上午 09:47:44
MRN:04142553



[AL]

MIP R-L

[F]

C227
W422

Brain MRI/MRA Report

One 5*4mm Rt Pcom artery aneurysm with posterolateral tilting. (Se/Im:5/4, 6/74) In favor of Rt fetal PCA noted.

>No obvious focal abnormal enhanced lesion in the brain parenchyma.

>No definite hyperintense areas on DWI in the brain.

>Several tiny hyperintense areas in the periventricular white matters on T2WI and FLAIR noted, probably due to gliosis, demyelination, or old tiny ischemic infarctions.

>The ventricular system and cortical sulci showed no dilatation.

>There was no mass effect or midline shift.

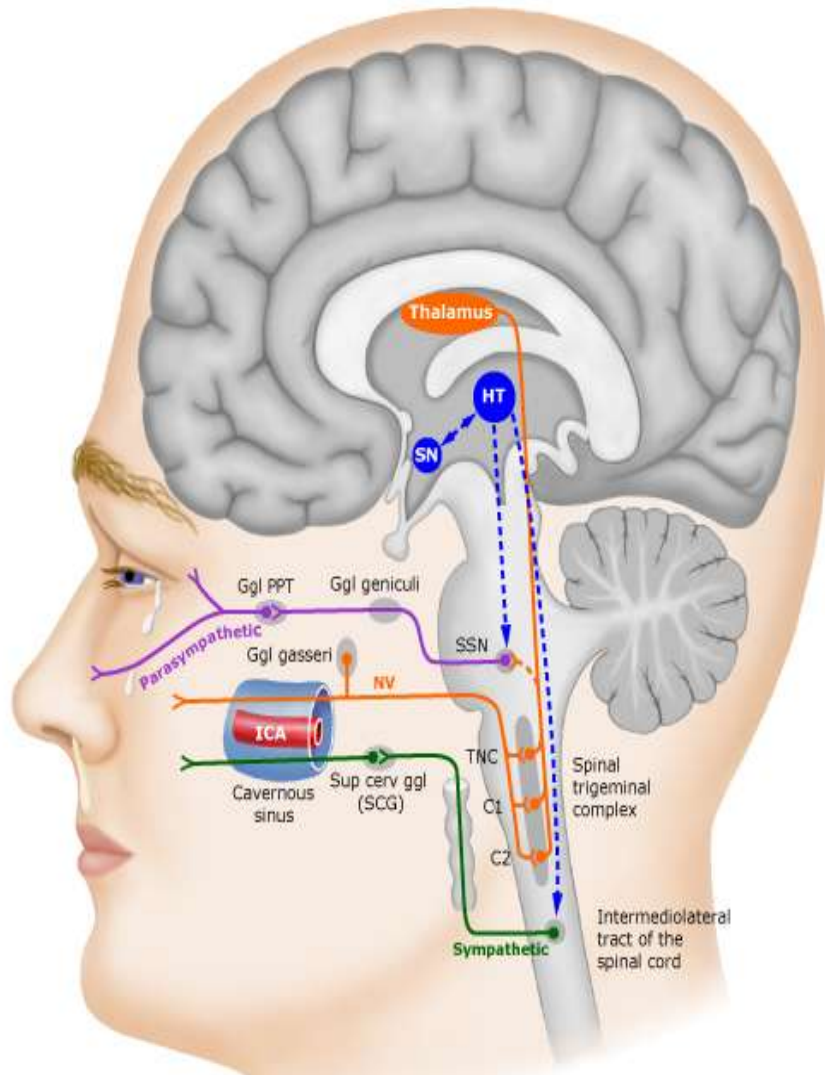
Imp:

1)One 5*4mm Rt Pcom artery saccular aneurysm with posterolateral tilting. (Se/Im:5/4,6/74). In favor of Rt fetal PCA noted.

2)One 5mm suprasellar enhanced nodule with connection to Rt pituitary gland, adjacent to Rt optic nerve and cavernous Rt ICA. (Se/Im:16/3,15/4) Nature?

Please correlation with clinical status and further management.

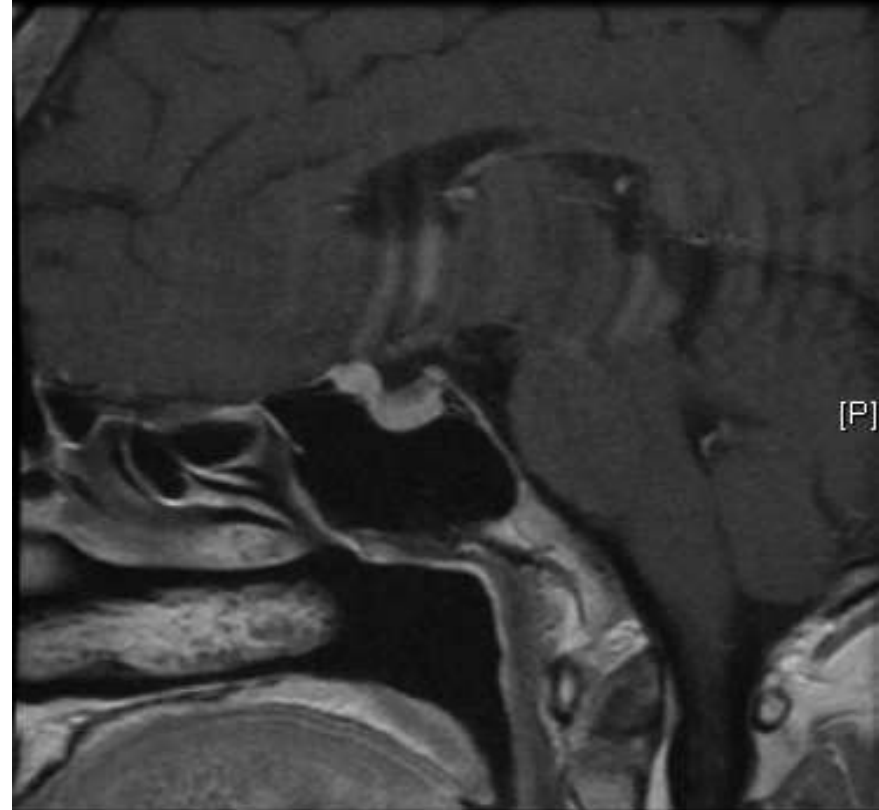
Pathogenesis of cluster headache



Se:15
Im:4

[H]

JANG WANG YOU MEI
Study Date:2010/6/17
Study Time:上午 09:4...
MRN:04142553



Sag FSE T1+C
Yes gd+

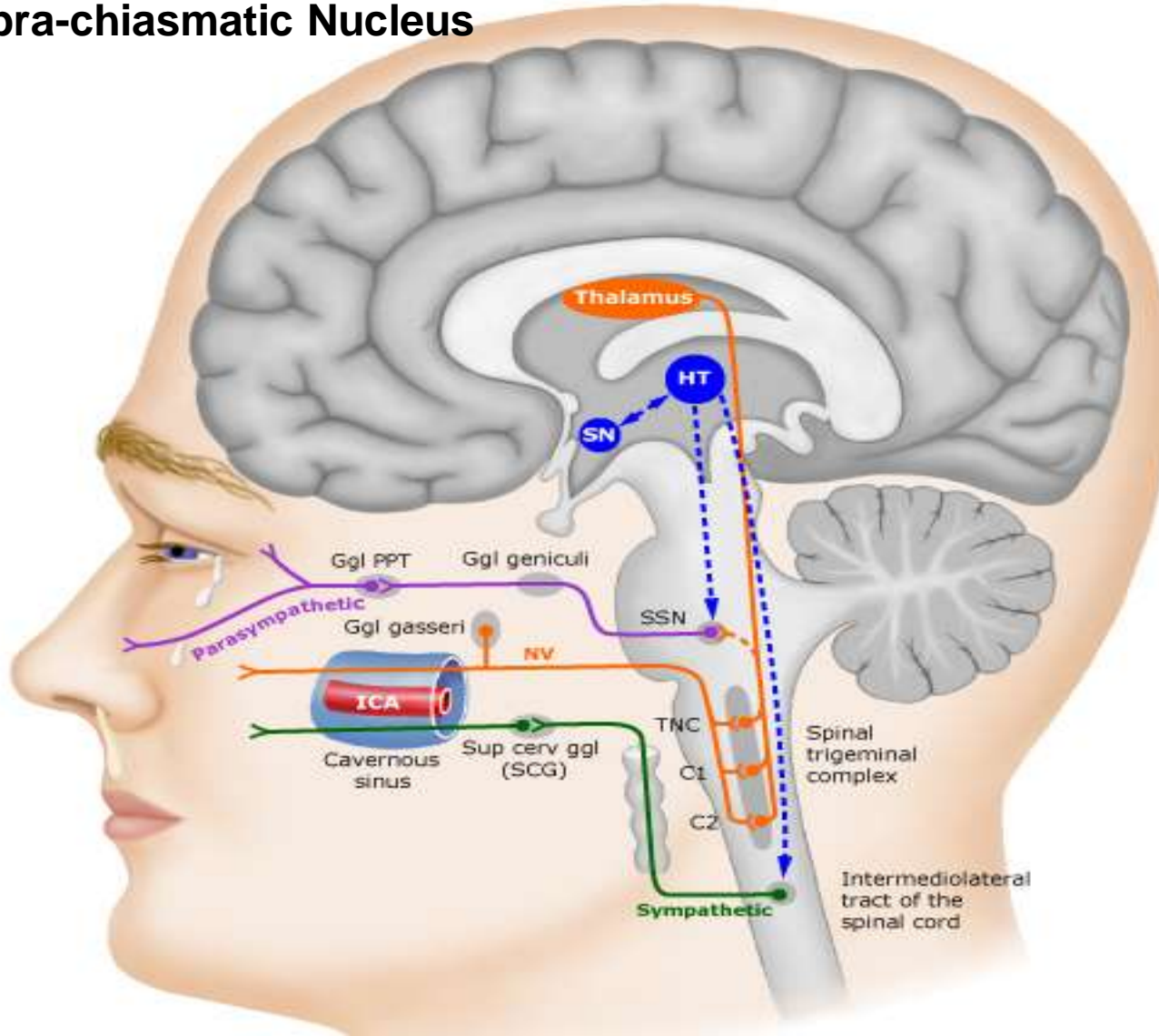
[F]

C2493
W4943

Cluster headache: Pathogenesis, diagnosis and management. *Lancet* 2005; 366:847

Pathogenesis of cluster headache

SN: Supra-chiasmatic Nucleus



Pathogenesis of Cluster Headache

Schematic model showing most of the putative actors in CH pathogenesis. Pain afferents from the trigeminovascular system synapse on the trigeminocervical complex (TNC), and then project to the thalamus and lead to activation in cortical areas known to be involved in pain transmission. Either a direct influence of the hypothalamus or a reflex activation of the parasympathetic outflow from the superior salivatory nucleus (SSN) predominately through the pterygopalatine (sphenopalatine) ganglion, leads to the parasympathetic symptoms ipsilateral to the pain. A third-order sympathetic nerve lesion, thought to be caused by vascular changes in the cavernous sinus loggia with subsequent irritation of the local plexus of nerve fibers, results in a partial Horner's syndrome. The key site in the CNS for triggering the pain and controlling the cycling aspects is in the posterior hypothalamic grey matter region, modulated by phase-shifting in the suprachiasmatic nuclei.

Abbreviations: Ggl = ganglion, HT = hypothalamus, ICA = internal carotid artery, NV = trigeminal nerve, PPT = pterygopalatine, SCG = superior cervical ganglion, SN = suprachiasmatic nucleus, SSN = superior salivatory nucleus, TNC = trigeminal nucleus caudalis

Modified from: May A. Cluster headache: pathogenesis, diagnosis, and management. Lancet 2005; 366:847.

Symptomatic Trigeminal Autonomic Cephalalgia

The Neurologist • Volume 15, Number 6, November 2009

- The majority of the cases of TACs are **idiopathic or primary.**
- There are numerous case reports of symptomatic cases in the literature, though a causal relationship with the underlying structural lesion is uncertain in many cases.
- This raises the issue of diagnostic evaluation required in this patient group to identify those with ***a causal underlying structural lesion.***

SYMPTOMATIC Cluster Headche

- 24 case reports of symptomatic cluster headache (CH) were indentified from literature review.
- The meam age at the onset of symptoms was 39 years. (range: 14–68 years).
- 16 were male and 8 were female.
- The mean time to diagnosis from onset of symptoms was 7 years (range: 2 weeks to 31 years).
- ***The Neurologist* • Volume 15, Number 6, November 2009**

SYMPTOMATIC Cluster Headache

● **Underlying Lesion**

- In 8 patients (**33%**), a **vascular abnormality** was identified including arteriovenous malformations, internal carotid artery dissections, cerebral venous sinus thrombosis, and subclavian steal syndrome.
- Twelve patients (**50%**) had a **tumor**, including 7 with **pituitary tumors** (29%).
- 1 case report of idiopathic **granulomatous hypophysitis**.
- Other lesions identified included a **clival epidermoid cyst**, **sphenoidal aspergilloma**, **foreign body in the maxillary sinus** in 1 patient each.
- Two patients had a normal computed tomography (CT) study but a subsequent abnormal magnetic resonance imaging (MRI) study.

Response to CH Abortive and Preventive Treatments

- Eight (33%) patients failed to respond to the abortive and preventive treatments tried.
- **Twelve patients (50%) responded with partial or complete benefit with at least 1 abortive or preventive treatment.**
- Four patients (17%) did not have any preventive treatments.
- *The Neurologist* • Volume 15, Number 6, November 2009

Response to Treatment of Pathology

- All the patients were reported as showing **complete resolution** of the headache syndrome after treatment of the underlying pathology.
- Though the follow-up period was not stated in 6 cases and was fairly short in several other cases.
- *The Neurologist* • Volume 15, Number 6, November 2009

Conclusion

- *A remarkable finding of this review was that a fairly high proportion of trigeminal autonomic cephalalgia syndromes were*
secondary to pituitary lesions
- ***The Neurologist • Volume 15, Number 6, November 2009***

Conclusion

- The purpose of this review was to identify the clinical features that may be pointers for distinguishing **symptomatic** cases of TACs from **primary** ones.
- It is difficult to draw definitive guidelines from this retrospective review, especially given the small number of cases identified.
- *The Neurologist* • Volume 15, Number 6, November 2009

Conclusion

- An **atypical clinical phenotype** or **abnormal examination** was present in at least half of the symptomatic cases of CH and SUNCT, and all cases of PH.
- Hence, the presence of atypical symptomatology or an abnormal examination at presentation or their development in the subsequent course of the disorder should prompt further investigations.

***The Neurologist* • Volume 15, Number 6, November 2009**

- **THANKS FOR YOUR ATTENTION !!**