CEFALEA TIPO TENSIONAL

Dra M.Paz Astorquiza.P
Neuróloga
Grupo de cefalea
SONEPSYN

- Es la cefalea primaria mas frecuentes en la población general 30-80%

- Mucho tiempo se la consideró como una patología psicógena

- La fisiopatología es compleja ,con una conjunción de mecanismos periféricos (tensión muscular) y centrales

- Sin gran mejoría en relación a tratamiento

Arnaud Fumal, Lancet Neurol 2008;7:70-83

Epidemiología

- 5:4 Mujeres : hombres
- Edad de inicio 25 a 30 años
- Coexiste frecuentemente con Migraña
- La prevalencia dentro de la edad infantil y adolecente : 9,8 %

Laurell K, et al Cephalagia 2004;24:380-8

Clasificación

- Cefalea tipo tensional episódica infrecuente:
  < de 1 día /mes(< 12 días /año)

- Cefalea tipo tensional episódica frecuente
  > 1 y < 15 días al mes durante al menos 3 meses (12 a 180 días al año)

- Cefalea tipo tensional crónica
  > de 15 días al mes durante al menos 3 meses

ICHD-II Cephalagia 2004 ; 24 (Suppl.1):1-160

2 .CEFALEA TIPO TENSIONAL

2.1.Cefalea tipo tensional episódica infrecuente

2.1.1 Con tensión en músculos pericraneales

2.1.1 Sin tensión en músculos pericraneale

2.2 Cefalea tipo tensional episódica frecuente

2.2.1 Con tensión en músculos pericraneales

2.2.2 Sin tensión en músculos pericraneales

2.3 Cefalea tipo tensional crónica

- 2.3.1. Con tensión en músculos peri craneales
- 2.3.2. Sin tensión en músculos peri craneales

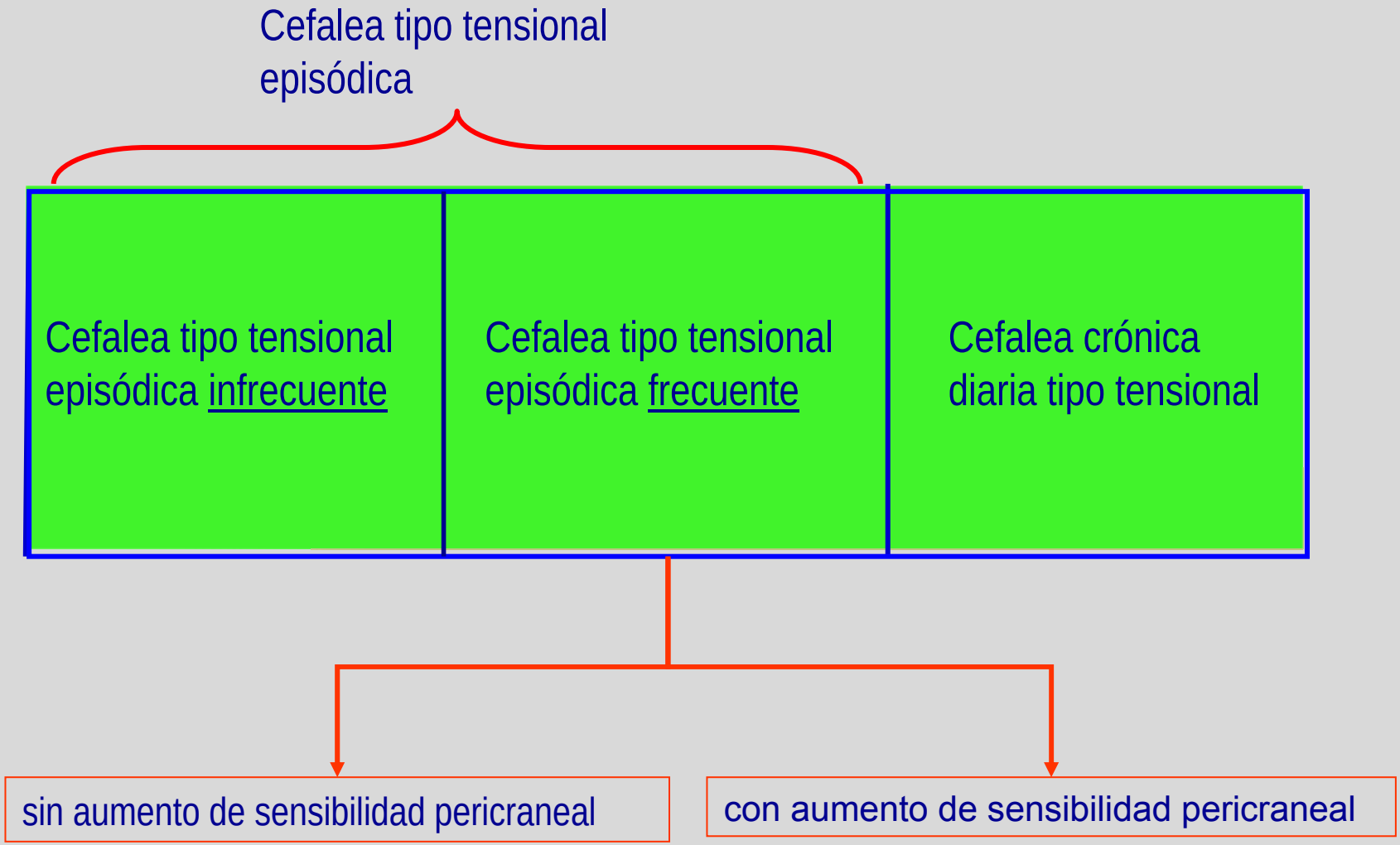
2.4 Cefalea tipo tensional probable

- 2.4.1. episódica infrecuente
- 2.4.2. episódica frecuente
- 2.4.3. crónica

- La identificación de la tensión muscular , no requiere estudios complementarios

- Se palpa la musculatura: temporal, frontal, Maseterina ,ECM, Esplenio y Trapecio

- La tensión muscular esta presente durante o fuera del episodio de cefalea.
- Aumenta en 24% durante la cefalea.
- Frecuentemente asociado a otra quejas somáticas o dolor musculo esquelético localizado.



Bigal ME et al Tension-type Headache: Classification and Diagnosis Curr Pain Head Rep 2005; 9: 423-429

ICHD II 2004 rev 1 2005

CRITERIOS DIAGNOSTICOS GENERALES ICHD-II

A. Al menos 10 episodios de cefalea que presenta los criterios B-D

B. Duración : 30 minutos a 7 días

C. Caracterizada por ≥ 2 de las siguientes:
   - Bilateral
   - Opresivo
   - Leve a moderado
   - No agravado por actividad física rutinaria

CRITERIOS DIAGNOSTICOS GENERALES ICHD-II

D. Los dos elementos siguientes

   Sin nauseas o vómitos

   Sin fotofobia o fonofobia

E. No atribuible a otra patología

CEFALEA TIPO TENSIONAL EPISÓDICA

- Muy frecuente

- Ausencia de evaluación medica:

  intensidad moderada

  Sin repercusión socio-profesional

  Responde en general a analgésicos simples

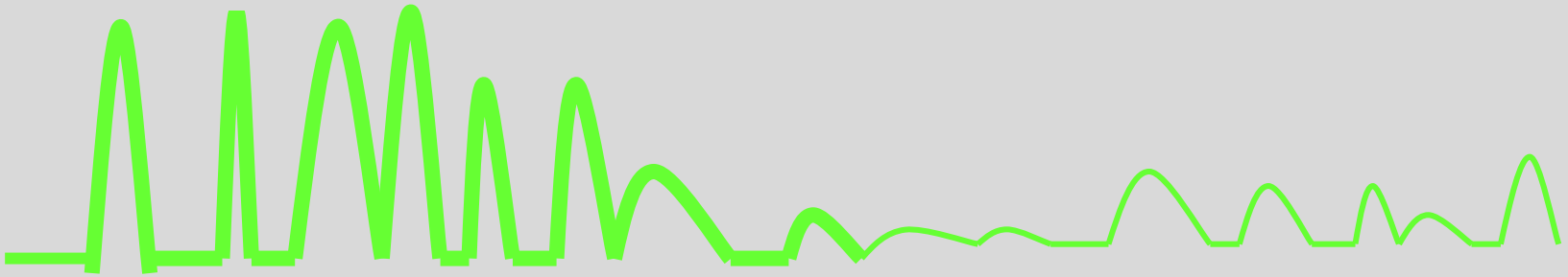
- Frecuencia promedio 6 días al mes

CEFALEA TIPO TENSIONAL CRÓNICA

- Casi cotidiana
- Evoluciona desde Cefalea Tipo tensional episódica
- Refractaria a tratamiento farmacológico
- Con gran impacto social, alteración en calidad de vida y disminución de eficiencia laboral
- Mayor cantidad de patología de sueño vs migrañosos

Clínica

Migraña con aura → Migraña sin aura → Cefalea mixta → Cefalea tipo tensional



muy invalidantes	no invalidantes
hemicraneal	bilateral
vómitos	sin vómitos
fotofobia y fonofobia	sin fotofobia y fonofobia
aura	sin aura

Jensen R. Diagnosis, Epidemiology and Imoact of Tension-type Headache Curr Head Rep 2003; 2: 455-459

PRONOSTICO

CTE

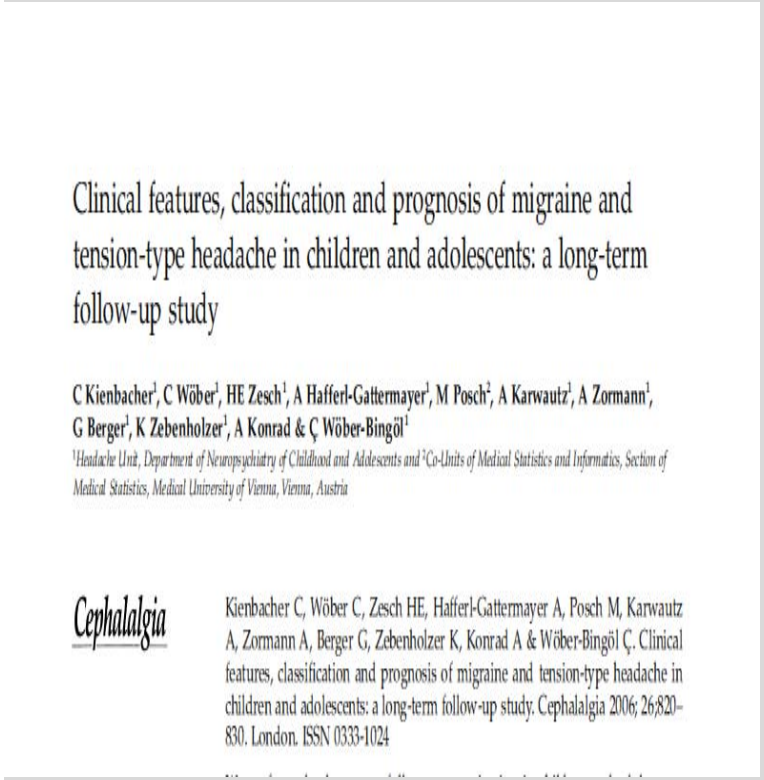
- 75% persiste en el tiempo
- 25% evoluciona a sus forma crónica

CTTC

- 31% se mantiene crónica
- 21% desarrollan abuso de medicamentos
- 48% regresa a una forma episódica con o sin tratamiento profiláctico

Moerk H, Jensen R .Cephalagia 2000;20:434

Pronóstico en niños y adolecentes



Clinical features, classification and prognosis of migraine and tension-type headache in children and adolescents: a long-term follow-up study

C Kienbacher[1], C Wöber[1], HE Zesch[1], A Hafferl-Gattermayer[1], M Posch[2], A Karwautz[1], A Zormann[1], G Berger[1], K Zebenholzer[1], A Konrad & Ç Wöber-Bingöl[1]

[1]Headache Unit, Department of Neuropsychiatry of Childhood and Adolescents and [2]Co-Units of Medical Statistics and Informatics, Section of Medical Statistics, Medical University of Vienna, Vienna, Austria

Cephalalgia

Kienbacher C, Wöber C, Zesch HE, Hafferl-Gattermayer A, Posch M, Karwautz A, Zormann A, Berger G, Zebenholzer K, Konrad A & Wöber-Bingöl Ç. Clinical features, classification and prognosis of migraine and tension-type headache in children and adolescents: a long-term follow-up study. Cephalalgia 2006; 26:820–830. London. ISSN 0333-1024

CEFALEA TIPO TENSIONAL

seguimiento 5 a 8 años

Libre de dolor (doce meses) 38%

Migraña 21%

Cefalea tipo tensional 41%

Impacto de las Cefalea tipo tensional

Ausentismo laboral:

Cefalea tipo tensional

820 días/año/1000 empleados empleados

(9% de la población)

Migraña

270 días/año/ 1000

(2% de población)

Lenaerts ME. Curr Pain Headache Rep 2006;10:459-462

Impacto cefalea tipo tensional (USA 2005):

31 a 44% ha consultado

47% ha consultado neurólogo

14% ha visitado servicio de urgencia en los últimos 3 meses

17% ha recibido tratamiento preventivo

Lenaerts ME. Burden of Tension-type Headache Curr Pain Headache Rep 2006; 10: 459-462

Comorbilidad psiquiátrica en CTTEp:

Trastorno de ansiedad: 60%

Depresión: 32%

Matta AP et al Depressive symptoms and anxiety in patients with chronic and episodic tension-type headache

Arq Neuropsiquiatr 2003. 61:991-994

Comorbilidad psiquiátrica en CTTEp:

	Depresión (%)
Siniatchkin et al (1998)	*8*
Mitsikostas et al (1999)	*14*
Rollnik et al (2000)	*8*
Yucel et al (2002)	*15*
Cassidy et al (2003)	*11*
Gesztelgyet al (2005)	*9*

Heckman BD et al Curr Pain Head Rep 2006; 10:439-447

Fisiopatología:

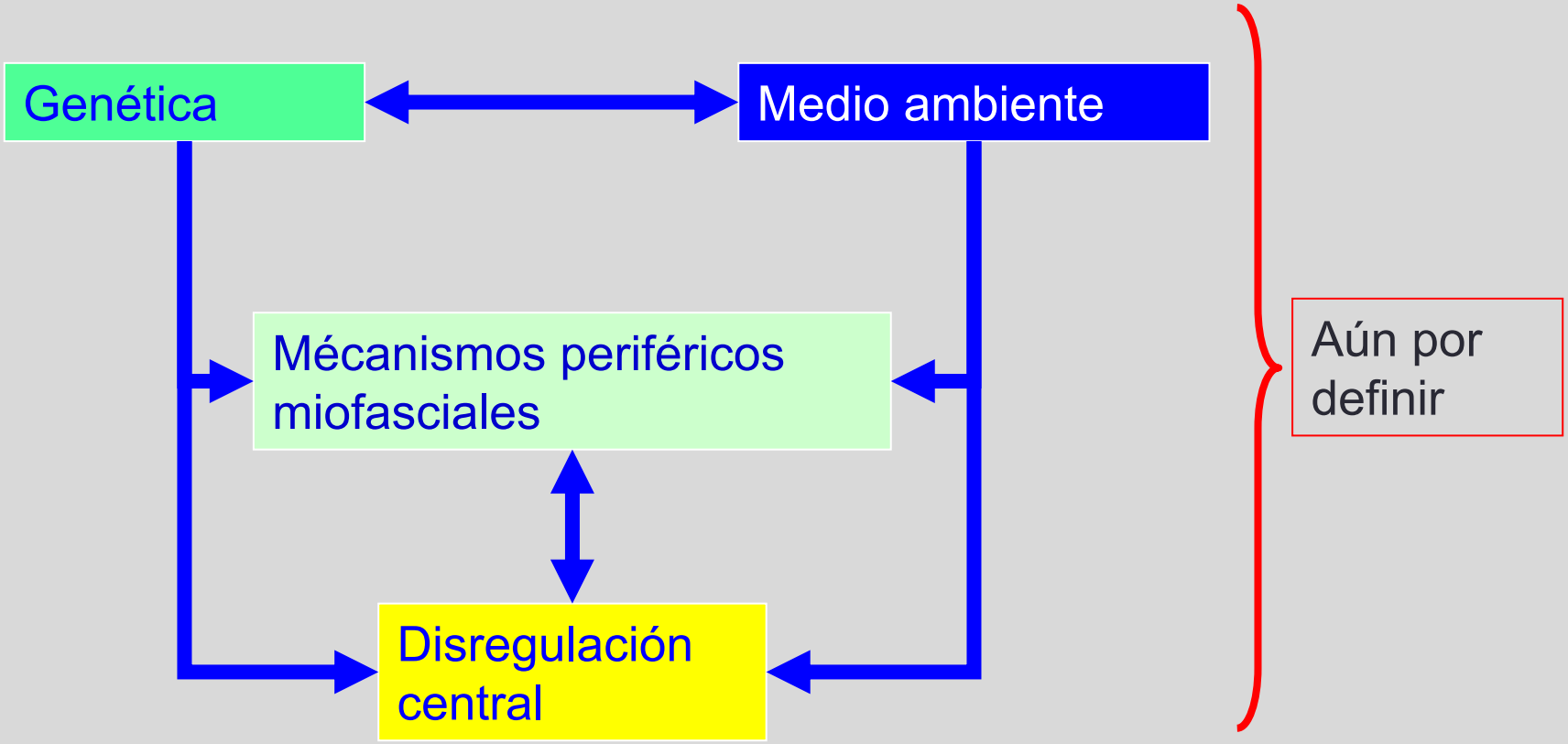
El principal problema que enfrenta la investigación en cefalea de tipo tensional es la ausencia de una población homogénea de sujetos:

- ***No hay especificidad en sus características clínicas***
- ***No hay especificidad en sus criterios diagnósticos***

Además los hallazgos son contradictorios

Fumal A et al Tension-type headache: current research and clinical management Lancet Neurol 2008; 7: 70-83

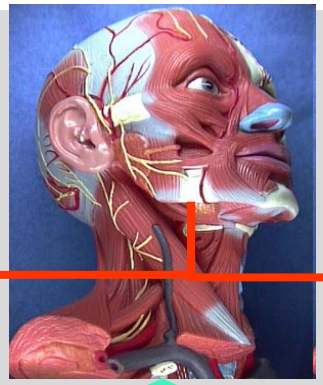
Fisopatologia:



Adaptación de: Fumal A et al Tension-type headache: current research and clinical management Lancet Neurol 2008; 7: 70-83

Fisiopatología -hipótesis de la transformación-:

Ashina S et al Pathophysiology of tension-type headache Curr Pain Head Rep 2005; 9: 415-422



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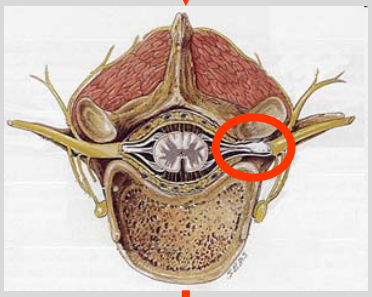
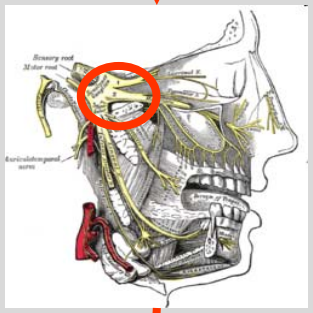
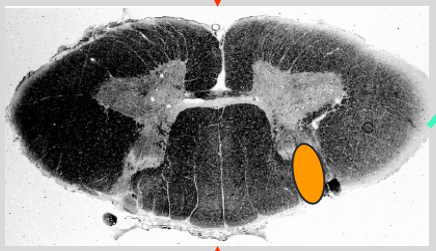


1º





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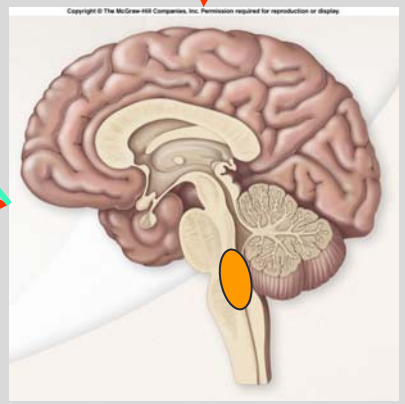
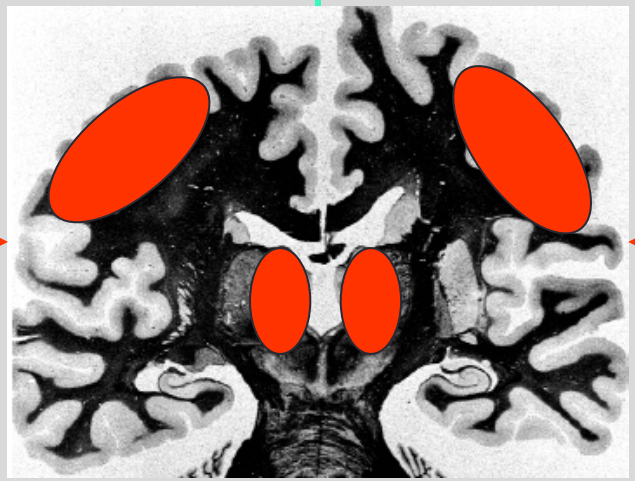




3º

Adaptación de: Ashina S et al Pathophysiology of tension-type headache Curr Pain Head Rep 2005; 9: 415-422

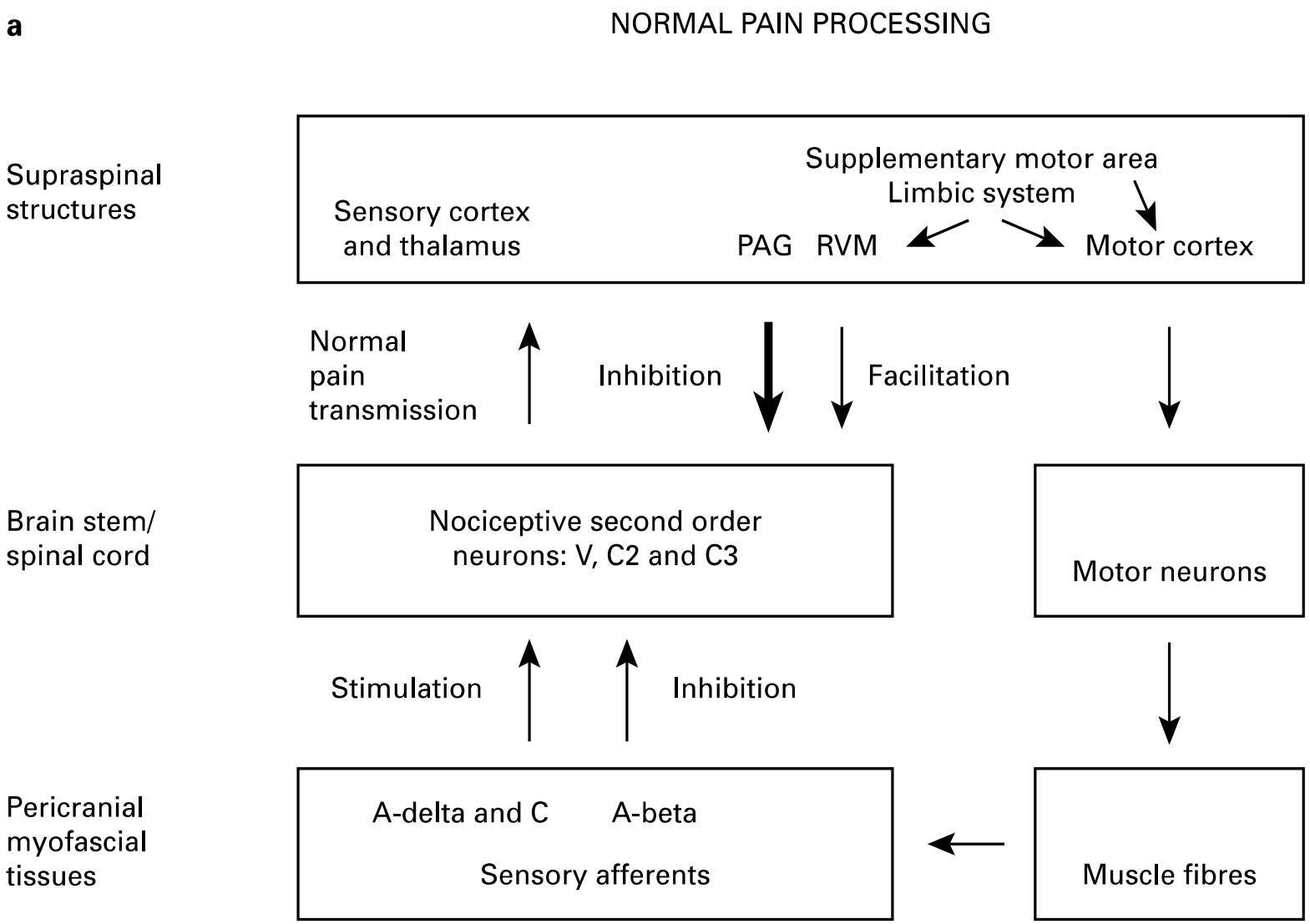


Figure 8 (See next page for caption.)

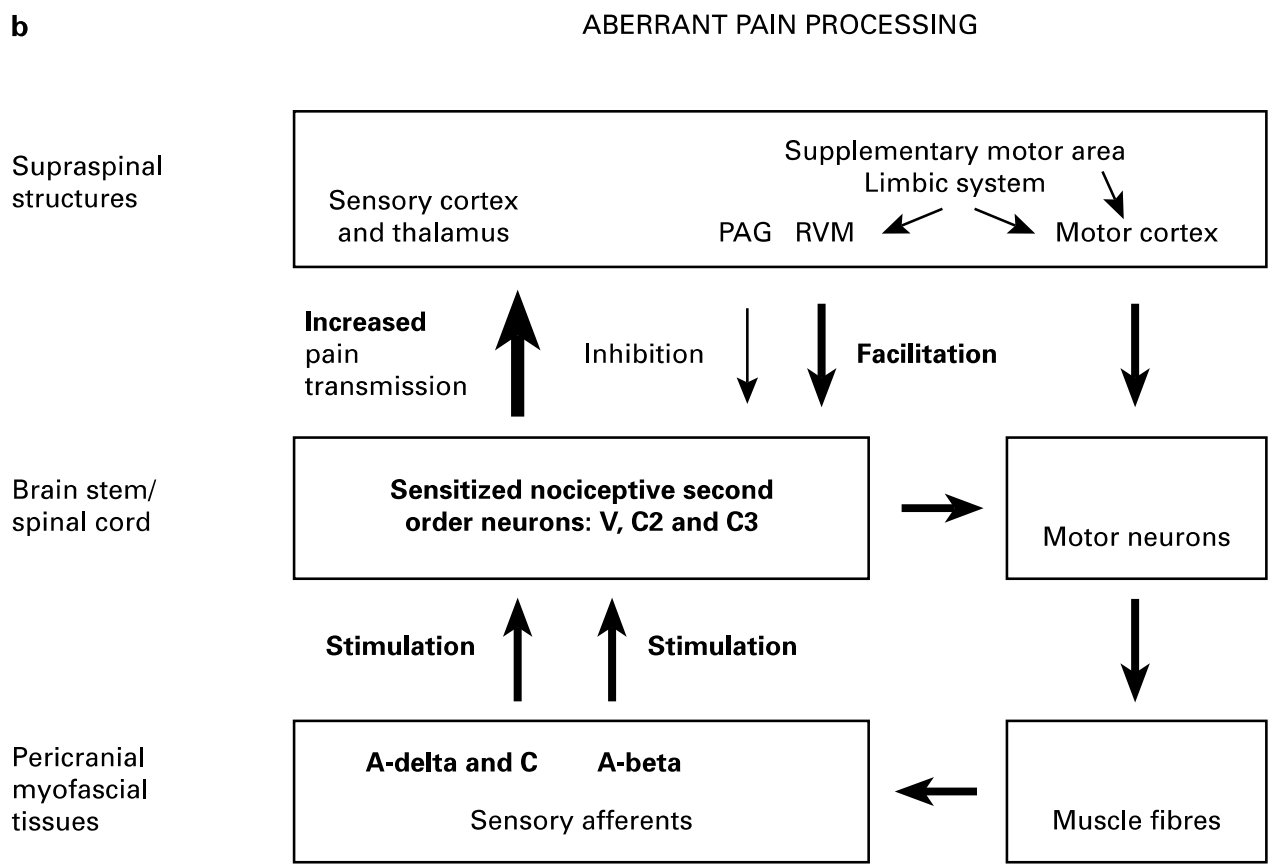
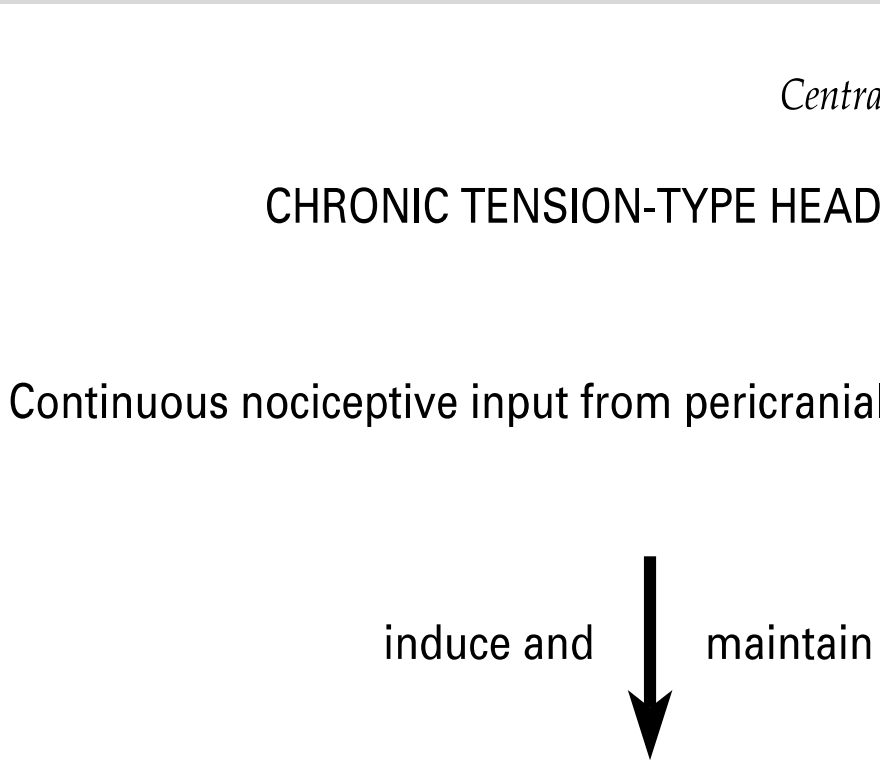


Figure 8 (See previous page.) A simplified theoretical model of chronic tension-type headache. The model states that the main problem in chronic tension-type headache is sensitization of dorsal horn neurones due to increased nociceptive inputs from pericranial myofascial tissues. (a) Normal pain processing. (b) Aberrant pain processing. Important alterations from the normal pain state are presented in bold: the nociceptive input from myofascial A-delta- and C-fibres is increased for unknown reasons, resulting in plastic changes in the spinal dorsal horn/trigeminal nucleus. As a consequence, the normally inhibitory effect of low-threshold A-beta-fibres on pain transmission in the spinal dorsal horn is altered to a pain stimulatory effect, and the response to nociceptive A-delta- and C-fibres is potentiated. The increased nociceptive stimulation of supraspinal structures may result in increased facilitation and decreased inhibition of pain transmission at the level of the spinal dorsal horn/trigeminal nucleus and in increased pericranial muscle activity. Together these mechanisms may induce and maintain the chronic pain condition. V, Trigeminal nerve; C2 and C3, second and third cervical segment of the spinal cord; PAG, periaquaductal grey; RVM, rostral ventromedial medulla.



e 9 The proposed pathophysiological model of chronic tension-type headache delineates two major aims for future researc identify the source of peripheral nociception in order to prevent the development of central sensitization in patients with dic tension-type headache, and (ii) to reduce established central sensitization in patients with chronic tension-type headach

Gray matter decrease in patients with chronic tension type headache

Abstract—Using MRI and voxel-based morphometry, the authors investigated 20 patients with chronic tension type headache (CTTH) and 20 patients with medication-overuse headache and compared them to 40 controls with no headache history. Only patients with CTTH demonstrated a significant gray matter decrease in regions known to be involved in pain processing. The finding implies that the alterations are specific to CTTH rather than a response to chronic head pain or chronification per se.

NEUROLOGY 2005;65:1483–1486

T. Schmidt-Wilcke, MD; E. Leinisch, MD; A. Straube, MD, PhD; N. Kämpfe, MD; B. Draganski, MD; H.C. Diener, MD, PhD; U. Bogdahn, MD, PhD; and A. May, MD

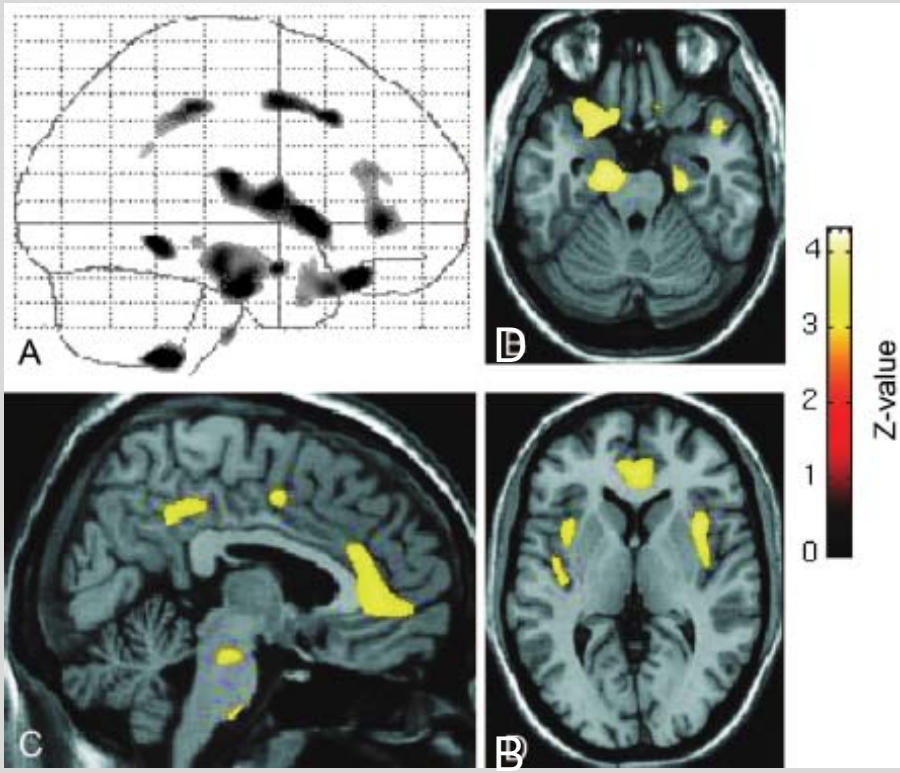


Figure. Statistical parametric maps demonstrating the structural difference in gray matter between chronic tension type headache (CTTH) patients and unaffected control subjects. Significant gray matter decrease is shown superimposed in yellow color on a normalized image of a healthy control subject. The left side of the picture is the left side of the brain. (A) Glass brain (B) Significant gray matter decrease in the anterior cingulate cortex (ACC) and bilaterally in the insula cortex. (C) Significant gray matter decrease in the anterior and posterior cingulate cortex and the dorsal rostral pons. (D) Significant gray matter decrease bilaterally in the parahippocamus and left orbitofrontal cortex. A correlation analysis of headache duration in the CTTH group showed a significant positive relationship between the decrease in gray matter with increasing headache duration in all regions shown in figure A-D.

Schmidt-Wilke T et al Neurology 2005; 65: 1483-1486

Genética:

Dinamarca 2006

IHS II

Sólo pares de gemelos

11.199 pares

Factores genéticos juegan rol importante en CTTEp frecuente

Factores ambientales juegan rol importante en CTTEp infrecuente

J Headache Pain (2006) 7:119–126
DOI 10.1007/s10194-006-0299-x

GREPPI-SICUTERI AWARD 2006

Michael Bjørn Russell
Jūratė Šaltytė-Benth
Niels Levi

Are infrequent episodic, frequent episodic and chronic tension-type headache inherited? A population-based study of 11 199 twin pairs

Greppi-Sicuteri Committee: Giorgio Zanchin, Miguel J.A. Lainez, Marcello Fanciullacci, Paolo Martelletti, Arne May, Lorenzo Pinessi

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Norway

M.B. Russell
Department of Research and Development,

Abstract The objective was to investigate the importance of genetic and environmental factors for infrequent episodic, frequent episodic and chronic tension-type headache. Twin pairs recruited from the population-based Danish Twin Registry received a posted questionnaire. Only twin pairs where both twins replied were included. A total of 3523 monozygotic (MZ), 4150 dizygotic (DZ) same-gender and 3526 DZ opposite-gender twin pairs were included. The prevalence of frequent episodic and chronic tension-type headache was significantly more frequent in women than men, and significantly higher MZ and same-gender DZ twin pairs was significantly different in women but not in men, although the difference was small in both genders. We conclude that genetic factors play a role in no and frequent episodic tension-type headache, while infrequent episodic tension-type headache is caused primarily by environmental factors. The data regarding chronic tension-type headache were limited, so no firm conclusion could be drawn.

Russell MB J Headache Pain 2006; 7: 119-126

Serotonina:

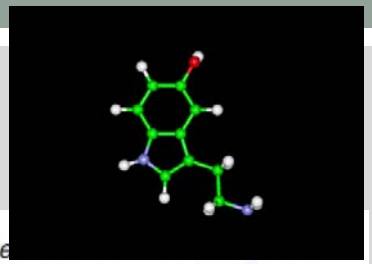

TABLE 2. *Serotonin metabolism and platelet function in tension headache*

Variable	CDH	N	CMCH-P⁺	N	CMCHP⁻	N	THE-P⁺	N	THE-P⁻	N	CTTH-P⁺	N	Ref.
5-HT													
Platelets	↔	9											(29)
Platelets	↓	95											(1)
Platelets			↓	23									(58)
Platelets					↔	14							(65)
Platelets									↑	28			(19)
Platelets							↑	30					(42)
Platelets											↓	31	(52)
Platelets											↓	13	(64)
Platelets											↔	40	(12)
Platelets							↑	13	↔	13			(39)
Plasma											↔	9	(29)
Plasma											↔	40	(12)
Plasma									↑	28			(19)
Plasma					↑	23							(68)
Serum							↔	0					(57)
5-HIAA													
Platelets									↑	28			(19)
Plasma									↑	28			(19)
Plasma	↔	9											(29)
Serum							↔	7					(57)
Urine											↔	39	(12)
5-Hydroxytryptophan													
Plasma	↔	9											(29)
5-HT Uptake platelets											↓	21	(37)
5-HT Uptake platelets									↑	20			(65)

CDH, chronic daily headache; CMCH, chronic muscle contraction headache; P⁺, during pain; P⁻, during pain-free period; THE, tension headache episodic type; CTTH, chronic tension-type headache; ↑, increased level; ↔, normal level; ↓, decreased level.

Flemming WB et al Biochemistry of blood and CSF in Tension-type Headache. In: Olesen J, Tfelt-Hansen P, Welch KM, eds. The Headaches. 2d ed. Philadelphia: Lippincott, Williams & Wilkins, 2000: 605-613

β-endorfinas:

TABLE 1. *Plasma levels of opioid peptides*

Peptide	n	Diagnosis	Result	Ref.
β-endorphin	8	DCH	Reduced	(9)
β-endorphin	11	DCH	Reduced	(24)
β-endorphin	47	DCH	Normal	(30)
β-endorphin	41	CTTH	Normal	(7)
β-endorphin	7	ETH	Reduced	(10)
Met-enkephalin	9	TH	Elevated	(28)

DCH, daily chronic headache; CTTH, chronic tension-type headache; ETH, episodic tension-type headache; TH, tension-type headache.

Flemming WB et al Biochemistry of blood and CSF in Tension-type Headache. In: Olesen J, Tfelt-Hansen P, Welch KM, eds. The Headaches. 2d ed. Philadelphia: Lippincott, Williams & Wilkins, 2000: 605-613

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Research Submission

Neuronal Nitric Oxide Synthase is Involved in the Induction of Nerve Growth Factor-Induced Neck Muscle Nociception

Andreas Isaak, MD; Jens Ellrich, MD, PhD

Background.—Neck muscle nociception mediated by nitric oxide may play a role in the pathophysiology of tension-type headache.

Objective.—The present study addresses the involvement of neuronal nitric oxide synthase (nNOS) in the facilitation of neck muscle nociception after local application of nerve growth factor (NGF).

Methods.—After administration of NGF into semispinal neck muscles, the impact of neck muscle noxious input on brainstem processing was monitored by the jaw-opening reflex in anesthetized mice. The modulatory effect of preceding and subsequent administration of an inhibitor of neuronal nitric oxide synthase on central facilitation was addressed in a controlled study.

Results.—With preceding i.p. application of saline or 0.096 mg/kg of the specific nNOS inhibitor Nω-propyl-L-arginine (NPLA), NGF induced a sustained reflex facilitation within 60 minutes. Preceding injection of 0.96 mg/kg or 1.92 mg/kg NPLA completely prevented the potentially facilitatory effect of NGF. Subsequent administration of 0.96 mg/kg NPLA did not affect established NGF-evoked reflex facilitation. Thus, NPLA prevents facilitation of brainstem processing by noxious myofascial input from neck muscles in a dose-dependent manner.

Conclusion.—These findings suggest that nNOS is involved in the induction but not the maintenance of NGF-evoked facilitation of nociception in the brainstem. These results from an experimental animal model may support the idea of NOS and nNOS as potential targets for pharmacological treatment of tension-type headache.

Key words: brainstem, craniofacial, tension-type headache, pain, trigeminal

Tratamiento del ataque :

Los resultados de los estudios realizados de acuerdo a Las recomendaciones de la IHS sugieren:

1.- AINEs son la primera línea de tratamiento.

2.- La mayoría de los estudios muestran que analgésicos son inferiores a AINEs.

3.- AAS 500 o 1000 mg más efectivo que placebo. La eficacia de AAS es similar a Paracetamol 500 o 1000 mg.

4.- Ibuprofeno 800 mg es la primera elección, seguido por Naproxeno 825 mg (debido a la relativa mayor tolerabilidad GI)

Fumal A et al Tension-type headache: current research and clinical management Lancet Neurol 2008; 7: 70-83

Tratamiento del ataque :

Los resultados de los estudios realizados de acuerdo a las recomendaciones de la IHS sugieren:

5.- Inhibidores de COX2 son efectivos, pero no se han comparado con AINEs convencionales.

6.- La adición de cafeína, sedantes o tranquilizantes podrían ser más efectivos en algunos pacientes. La cafeína 130 o 200 mg aumenta significativamente la eficacia de analgésicos e Ibuprofeno

Fumal A et al Tension-type headache: current research and clinical management Lancet Neurol 2008; 7: 70-83

Tratamiento profiláctico

Principios de la profilaxis en CTT

- *Profilaxis farmacológica + terapia conductual es mejor que c/u por separado*
- *La terapia cognitivo conductual parece tener un rol en CCDTT*
- *Profilaxis farmacológica esta indicada en CCDTT y CTTEp frecuente*
- *Inicio en dosis muy bajas, incremento paulatino*
- *Mantención por 3 a 6 meses, suspensión paulatina*

Lenaerts ME Pharmacoprophylaxis of Tension-type headache Curr Pain Head Rep 2005; 9: 442-447

Tratamiento profiláctico :

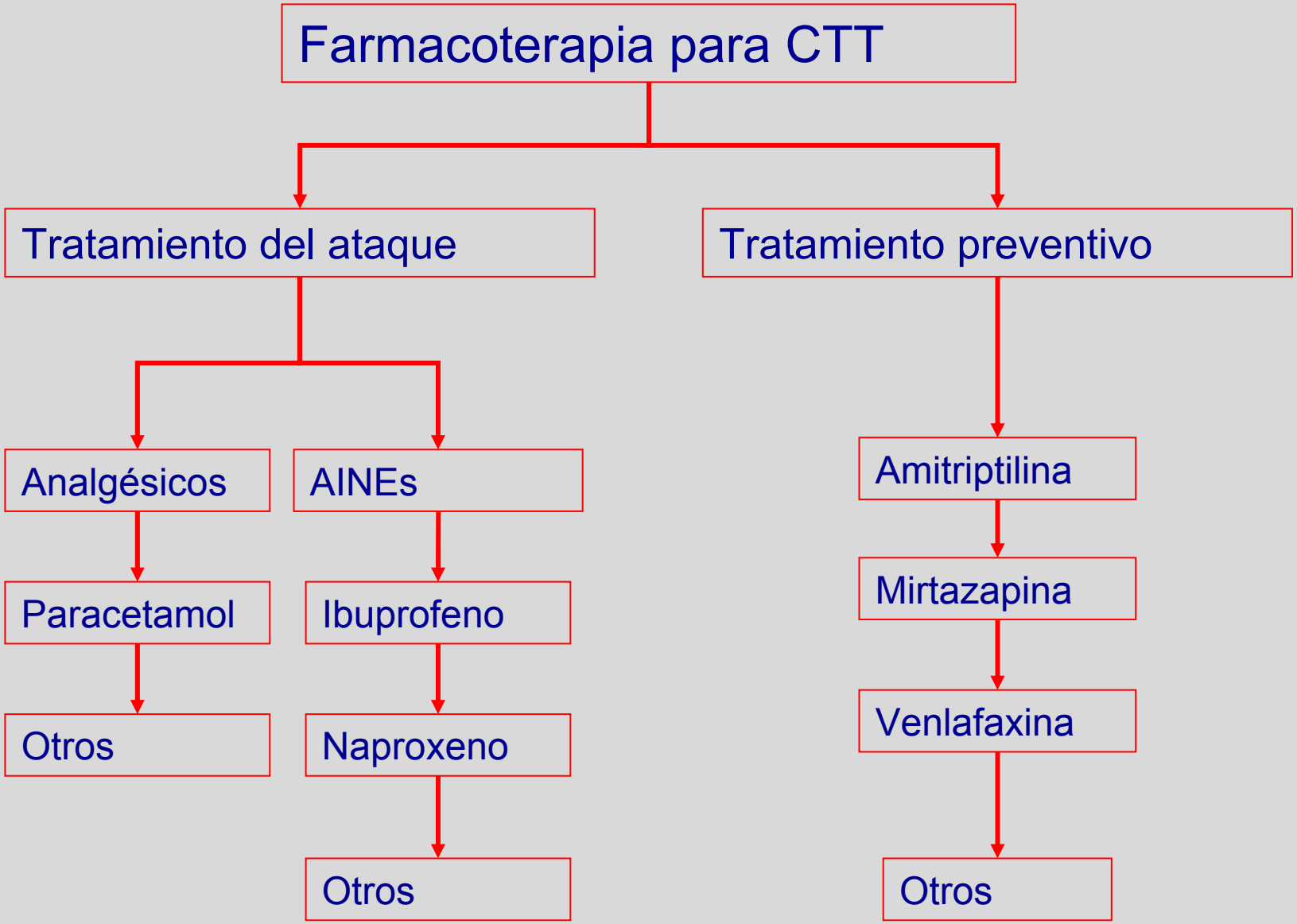
Los resultados de los estudios realizados de acuerdo a las recomendaciones de la IHS sugieren:

1.- Antidepresivos tricíclicos: Amitriptilina es la primera elección. Segunda elección Mirtazapina. Tercera elección Doxepina, Maprotilina.

2.- Tricíclicos deben ser evitados en: 3ª edad, suicidas, epilépticos, tendencia a hipotensión y glaucoma de ángulo estrecho

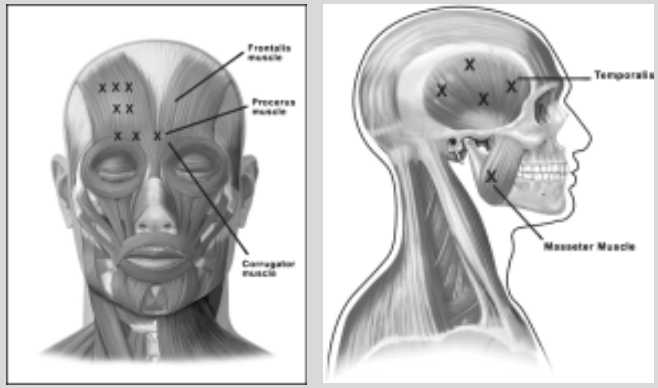
3.- Dosis sólo nocturnas, inicialmente muy bajas (6.25 o 3.125 mg de ATL), lento incremento (escalones de 7,10, 15 o 30 días), muchos pacientes se benefician con dosis bajas. Dosis promedio 50 a 75 mg de ATL.

Fumal A et al Tension-type headache: current research and clinical management Lancet Neurol 2008; 7: 70-83


Farmacoterapia para CTT
Tratamiento del ataque
Tratamiento preventivo
Analgésicos
AINEs
Paracetamol
Ibuprofeno
Otros
Naproxeno
Otros
Amitriptilina
Mirtazapina
Venlafaxina
Otros

11 ECRCP

Metodología regular



SPECIAL ARTICLE

AMERICAN ACADEMY OF NEUROLOGY 60TH ANNIVERSARY

Assessment: Botulinum neurotoxin in the treatment of autonomic disorders and pain (an evidence-based review)

Report of the Therapeutics and Technology Assessment Subcommittee of the American Academy of Neurology

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ABSTRACT

Objective: To perform an evidence-based review of the safety and efficacy of botulinum neurotoxin (BoNT) in the treatment of autonomic and urologic disorders and low back and head pain.

Methods: A literature search was performed including MEDLINE and Current Contents for therapeutic articles relevant to BoNT and the selected indications. Authors reviewed, abstracted, and classified articles based on the quality of the study (Class I–IV). Conclusions and recommendations were developed based on the highest level of evidence and put into current clinical context.

Results: The highest quality literature available for the respective indications was as follows: axillary hyperhidrosis (two Class I studies); palmar hyperhidrosis (two Class II studies); drooling (four Class II studies); gustatory sweating (five Class III studies); neurogenic detrusor overactivity (two Class I studies); sphincter detrusor dyssynergia in spinal cord injury (two Class II studies); chronic low back pain (one Class II study); episodic migraine (two Class I and two Class II studies); chronic daily headache (four Class II studies); and chronic tension-type headache (two Class I studies).

Recommendations: Botulinum neurotoxin (BoNT) should be offered as a treatment option for the treatment of axillary hyperhidrosis and detrusor overactivity (Level A), should be considered for palmar hyperhidrosis, drooling, and detrusor sphincter dyssynergia after spinal cord injury (Level B), and may be considered for gustatory sweating and low back pain (Level C). BoNT is probably ineffective in episodic migraine and chronic tension-type headache (Level B). There is presently no consistent or strong evidence to permit drawing conclusions on the efficacy of BoNT in chronic daily headache (mainly transformed migraine) (Level U). While clinicians' practice may suggest stronger recommendations in some of these indications, evidence-based conclusions are limited by the availability of data. *Neurology*® 2008;70:1707–1714

Conclusiones:

- En CCD no hay argumentos para afirmar o refutar los beneficios de BTx.
- En CCDTT BTx es probablemente inefectivo
- En MEp BTx es probablemente inefectivo
- No hay datos en CTTEp

Neurology 2008; 70: 1707–1714

CTT IHS 1988

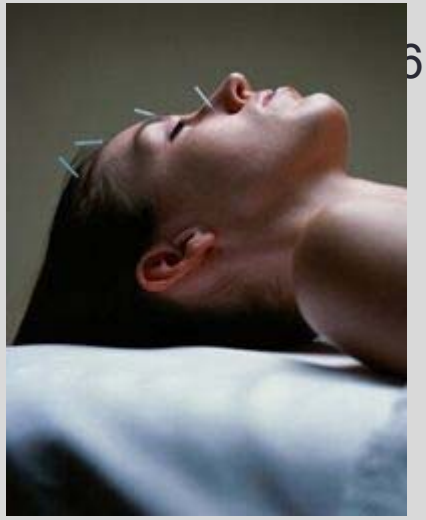
163 EC -> 8 ECR: 896 pacientes

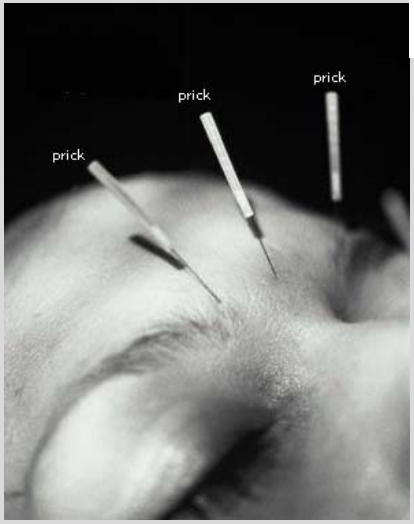
Acp vs Acp “falsa”

10 a 409 pacientes

6 CCDTT+CTTEp; 2 CTTEp

3 a 8 semanas en 6 a 15 sesiones





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ELSEVIER

Critical Review

Acupuncture for Tension-Type Headache: A Meta-Analysis of Randomized, Controlled Trials

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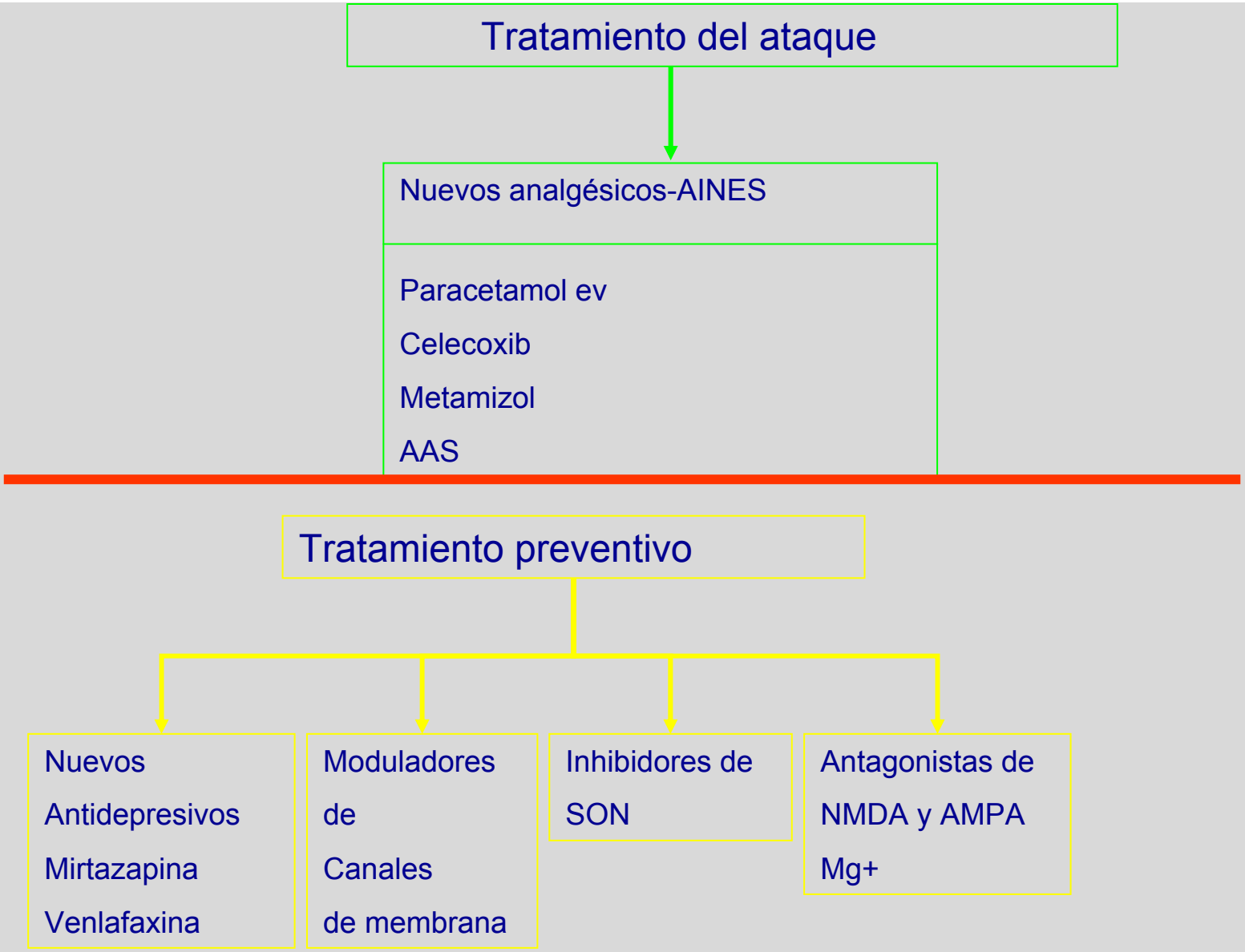
Abstract: We investigated the efficacy and safety of acupuncture for the treatment of tension-type headache by conducting a systematic review and meta-analysis of randomized, controlled trials. The Cochrane Central Register of Controlled Trials, MEDLINE, EMBASE, CINAHL, and PsycINFO were searched from inception through August 2007. No search or language restrictions were applied. Eight randomized, controlled trials met our inclusion criteria. Pooled data from 5 studies were used for the meta-analysis. Our primary outcome was headache days per month. We assessed data from 2 time points: During treatment and at long-term follow-up (20–25 weeks). The weighted mean difference (WMD) between acupuncture and sham groups was used to determine effect size, and a validated scale was used to assess the methodological quality of included studies. During treatment, the acupuncture group averaged 8.95 headache days per month compared with 10.5 in the sham group (WMD, −2.93 [95% CI, −7.49 to 1.64]; 5 trials). At long-term follow-up, the acupuncture group reported an average of 8.21 headache days per month compared with 9.54 in the sham group (WMD, −1.83[95% CI, −3.01 to −0.64]; 4 trials). The most common adverse events reported were bruising, headache exacerbation, and dizziness.

Perspective: *This meta-analysis suggests that acupuncture compared with sham for tension-type headache has limited efficacy for the reduction of headache frequency. There exists a lack of standardization of acupuncture point selection and treatment course among randomized, controlled trials. More research is needed to investigate the treatment of specific tension-type headache subtypes.*

Key words: *Acupuncture therapy, tension-type headache, meta-analysis, review literature.*

Davis MA et al J Pain 2008, may 20



Lenaerts ME Curr Pain Head Rep 2007; 11: 461–464

GRACIAS