



Sociedade Brasileira de Cefaleia
Filiada à Sociedade Internacional de Cefaleia



The Headache Masters School

Cefaleia e Migrânea na Criança e no Adolescente

Marco Antônio Arruda

arruda@institutoglia.com.br

Neurologista da Infância e Adolescência

Mestre e Doutor em Neurologia pela Universidade de São Paulo

Membro Titular da Academia Brasileira de Neurologia

Membro do Comitê de Cefaleias na Infância da

International Headache Society

Indústria	Consultor	<i>Advisory Board</i>	Ações	<i>Speaker</i>	Recursos Pesquisa	Organização Congresso
Janssen-Cilag	+	-	-	-	-	+
Novartis	-	-	-	-	-	+
Shire	-	+	-	+	-	+
Lilly	+	-	-	-	-	-
Mantecorp	-	-	-	+	-	-

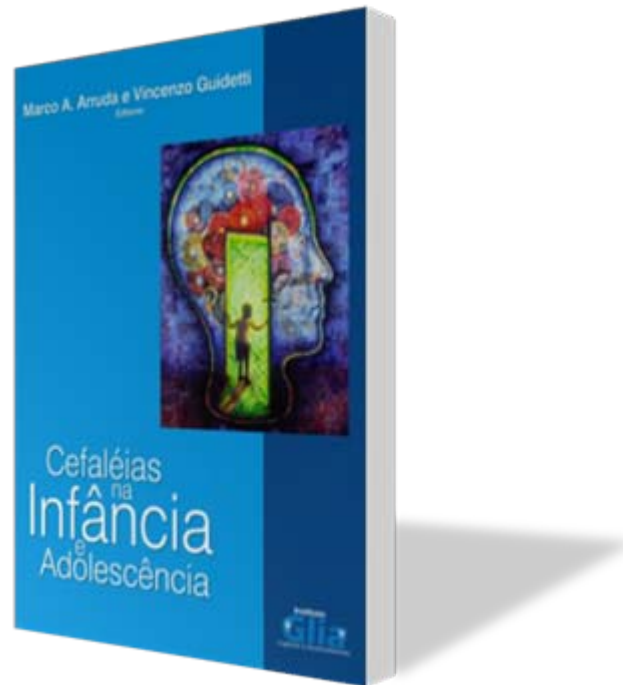
Potenciais conflitos de interesse



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Objetivos

1. Classificação clínica e diagnóstica (ICHD-II)
2. Cefaleias incomuns na infância e sinais de alerta ('red flags')
3. Migrânea e cefaleia do tipo tensional na infância
4. Síndromes periódicas da infância e outras comorbidades
5. Aspectos epidemiológicos
6. Tratamento





The International Classification of Headache Disorders

2nd Edition (ICHD-II)
Cephalalgia 2004; 24 (Suppl 1)

14 grupos (1 dígito)

91 subgrupos (2 dígitos)

196 condições diagnósticas (1-4 dígitos)

113 já descritas na Infância e
Adolescência

MV, 2 anos, masc.

Queda da própria altura há 2 semanas, sem perda da consciência
Após 4 dias, início de queixa de cefaleia que persiste há 1 semana

HP+ noite e madrugada provocando despertar
acorda gritando e chorando

Chega a bater a cabeça na parede – sic

PA-, NA+, VO+, FT? FN?

Mudança comportamental

Criança quieta, apática, inapetente e com sonolência
diurna excessiva

Nunca havia se queixado de cefaleia anteriormente

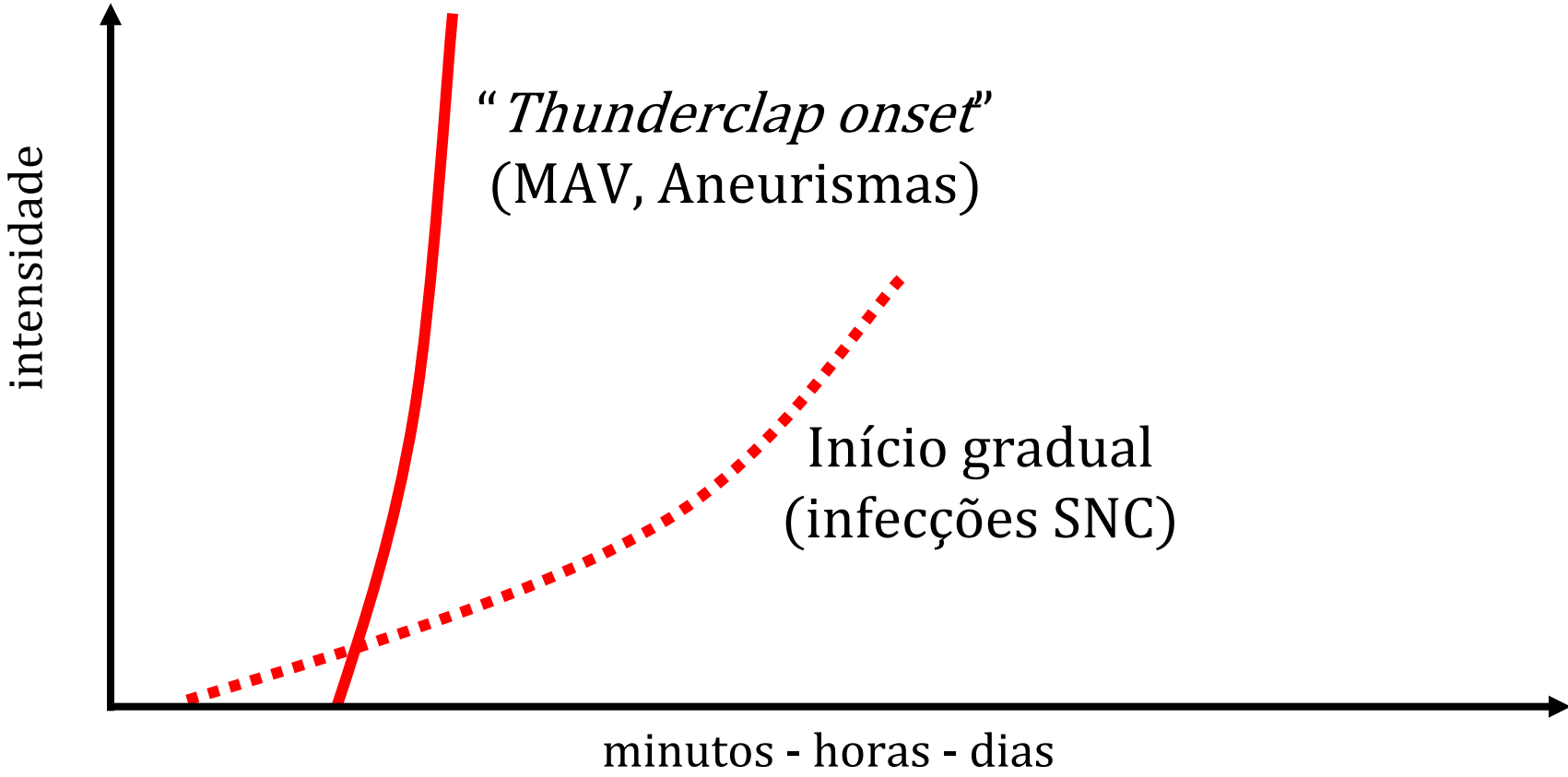
EN – normal

Cefaleia da HIC (hematoma extradural)



AGUDA

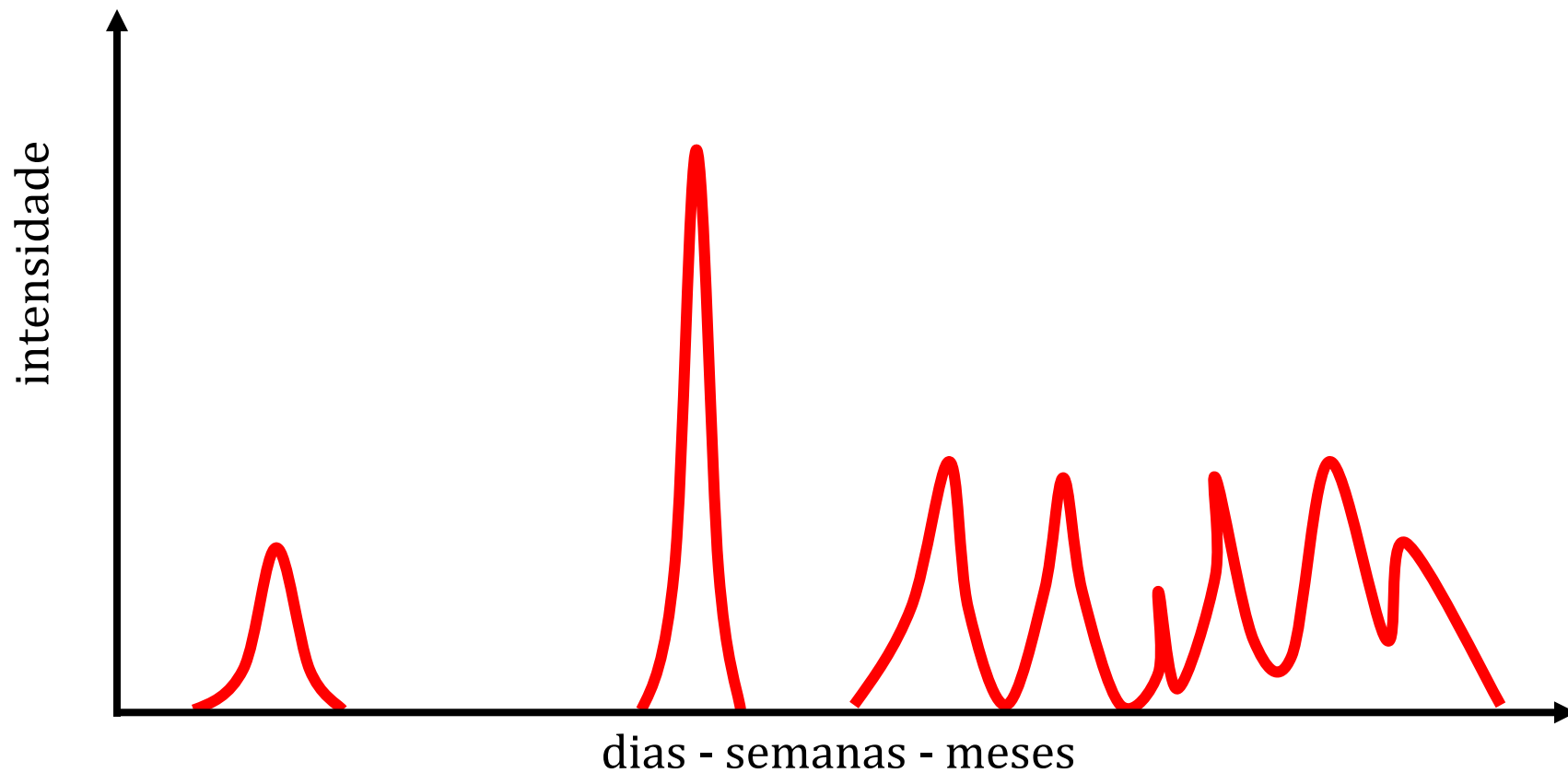
IVAS, febre



Padrão temporal

CRÔNICA RECORRENTE

Migrânea (enxaqueca)





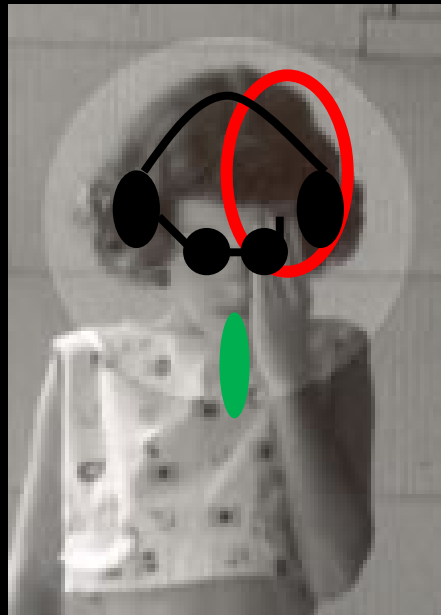
The International Classification of Headache Disorders

2nd Edition (ICHD-II)
Cephalalgia 2004; 24 (Suppl 1)

Migrânea sem Aura

5

1-72 h



2/4

Unilateral
Pulsátil
MI a GI
Esforço Físico

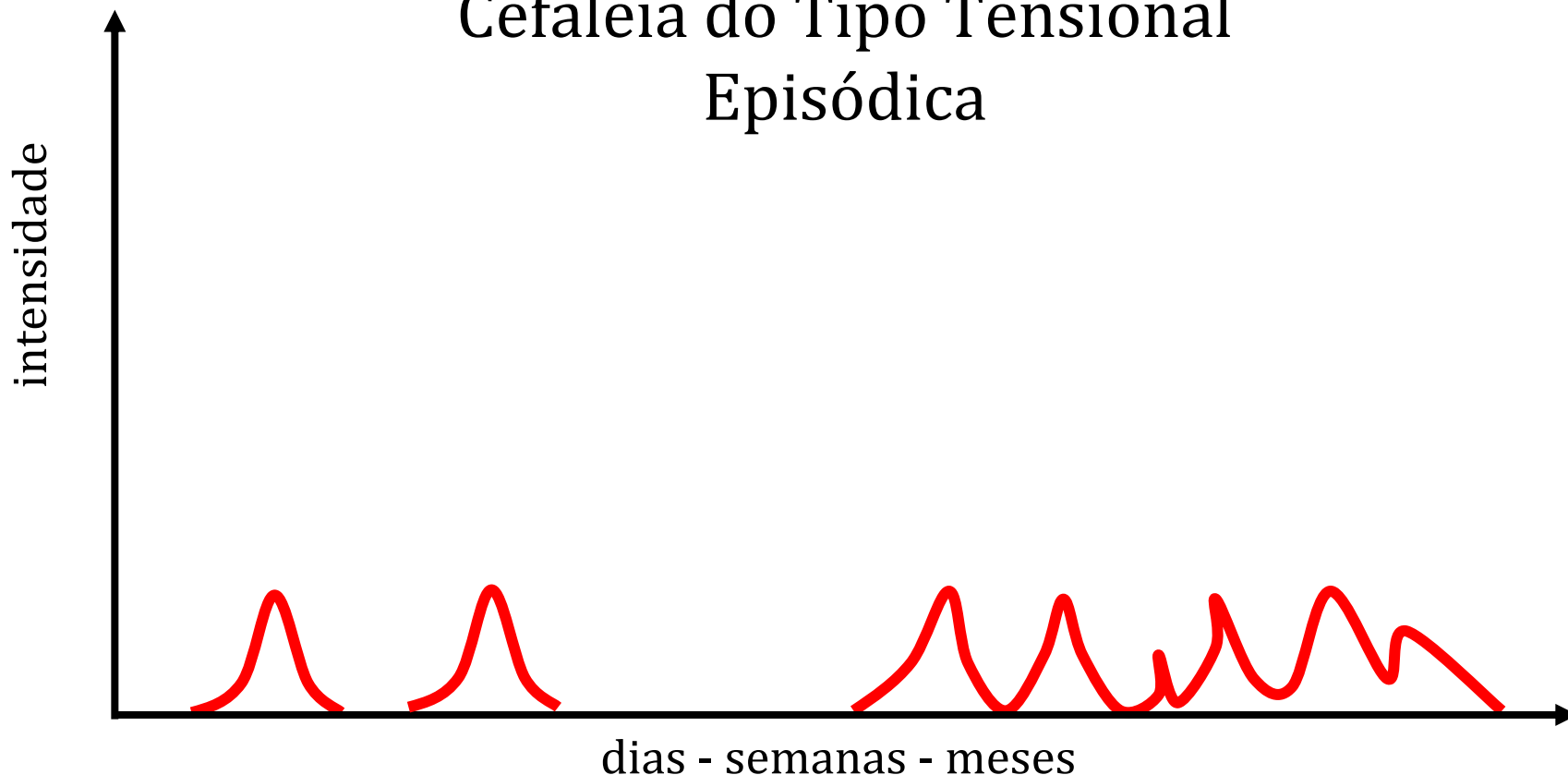
1/2

Náusea e/ou Vômito
Fotofobia e Fonofobia

Não atribuída a outros transtornos

CRÔNICA RECORRENTE

Cefaleia do Tipo Tensional
Episódica



Padrão temporal



The International Classification of Headache Disorders

2nd Edition (ICHD-II)
Cephalalgia 2004; 24 (Suppl 1)

Cefaleia do Tipo Tensional Episódica

10

30min-7dias



2/4

Bilateral
Pressão/aperto
(Não-pulsátil)
PI a MI
Sem piora EF

2/2

Sem Náusea ou Vômito
Foto ou Fonofobia

Não atribuída a outros transtornos

CGPC, masc., 12 anos, cefaléia recorrente há 3 meses
piora progressiva há 15 dias, F 1-3/dia, HP madrugada,
D < 30 min., GI, INC, Fronto-orbitária esquerda, ptose
palpebral, congestão conjuntival e lacrimejamento E,
melhora absoluta com inalação de O₂

História familiar de migrânea +++

Exame físico geral e neurológico normais

TC e AngioRMN crânio normais



Cluster Headache in children and adolescents Ten years of follow-up in 3 pediatric cases

Marco A. Arruda, Lucas Bonamico, Cleiber Stella,
Carlos A. Bordini, Marcelo E. Bigal





Cluster Headache in children and adolescents Ten years of follow-up in 3 pediatric cases

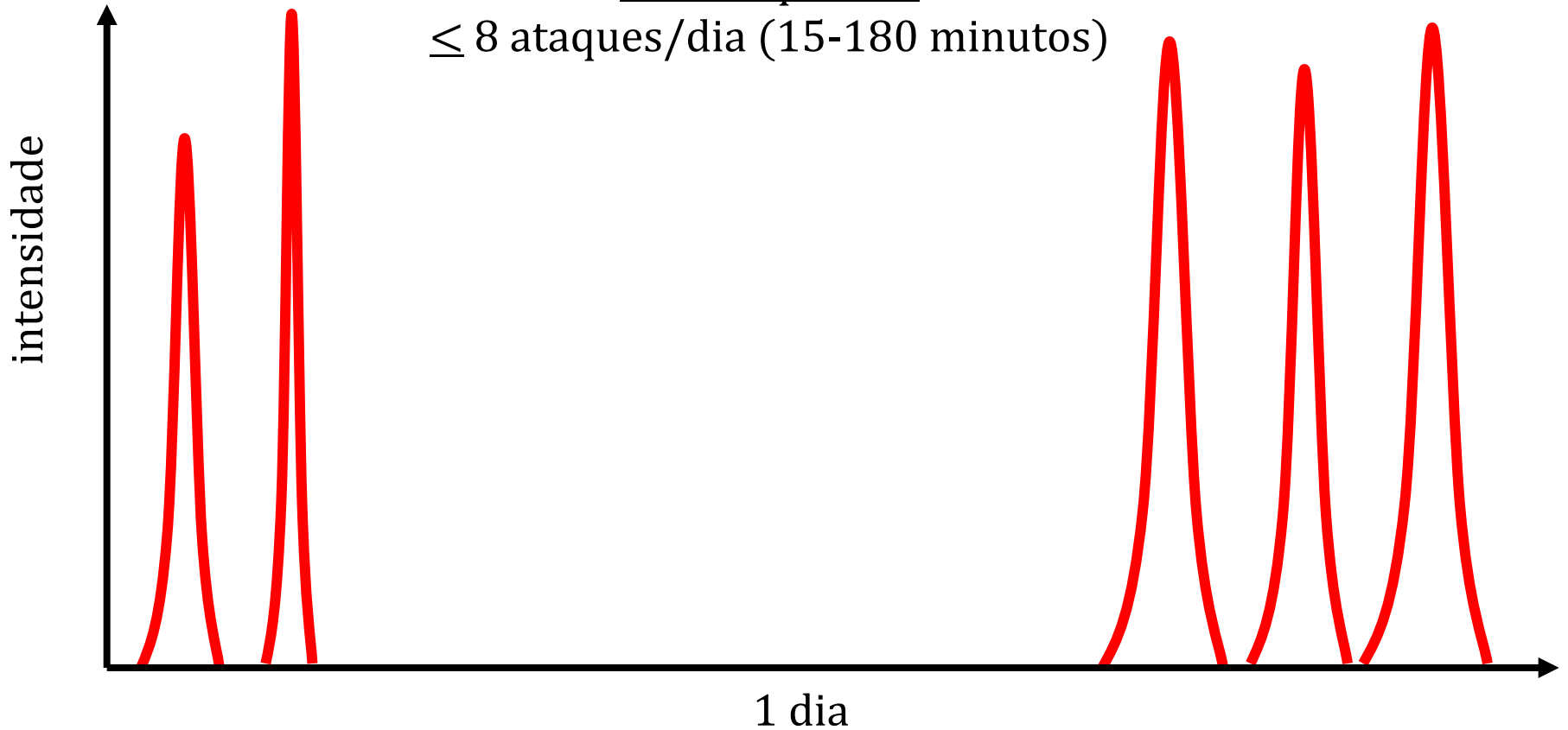
Marco A. Arruda, Lucas Bonamico, Cleiber Stella,
Carlos A. Bordini, Marcelo E. Bigal

	Case 1 12-year-old boy	Case 2 13-year-old boy	Case 4 9-year-old girl
ICHD-II	Episodic CH	Chronic CH	Episodic CH
Number of cluster periods	5	-	3
Intensity of pain	Severe	Severe	Excruciating
Location of the pain	Periorbital, (left side)	Periorbital, (left side)	Ocular/periorbital, (right side)
Duration of the attacks	60-90 minutes	40-90 minutes	40-60 minutes
Autonomic manifestations	Conjunctival injection Eyelid oedema (bilateral)	Lacrimation Eyelid oedema Conjunctival injection	Conjunctival injection Lacrimation, Rhinorrhea Facial sweating, Agitation
Frequency of the attacks	1-2/day	2-3/day	2/day
Abortive treatment	Oxygen inhalation (E) Sumatriptan nasal spray (E)	-	Dihydroergotamine (I)
Prophylactic treatment	Verapamil (NT), Methysergide (I), Lithium (I), Valproic acid (I) Prednisolone (E), Indomethacin (E), Melatonin (E), Topiramate (E)	Betamethasone depot (E), Prednisolone (NT), Verapamil (NT) Lithium (E)	Indomethacin (NT), Methysergide (E), Prednisolone (E), Divalproex (E/I), Topiramate (E)
Follow-up	11 years 4 months Until present day	10 years 7 months Until present day	10 years 2 months Until 3 years ago
Maximum remission period	8 years	Unremitting from onset	5 years
Last cluster period	8 years	-	2 years and 7 months

CRÔNICA RECORRENTE

Cefaleia em Salvas

Alta frequência
 ≤ 8 ataques/dia (15-180 minutos)



Padrão temporal

LGMP, 1 ano e 10 meses, fem.

Desde os 8 meses de vida ataques em que subitamente gritava, espalmava a mão E sobre a orelha esquerda começava a chorar e em seguida voltava a brincar

D 8 segundos

F aumento progressivo: quinzenal-semanal a 20 ataques/dia

HP-, DN+, FD-, sintomas associados -

EN – ndn

1 ano e 3 meses: TC Crânio normal.





Secondary intermedius neuralgia-like pain in a young child

HM da Silva, JLR Boullosa & MA Arruda

DIÁRIO DA CEFALÉIA

NOME: [REDACTED] MÊS: set/

INTENSIDADE DA DOR
 1 - LEVE 2 - MODERADA 3 - INTENSA aut

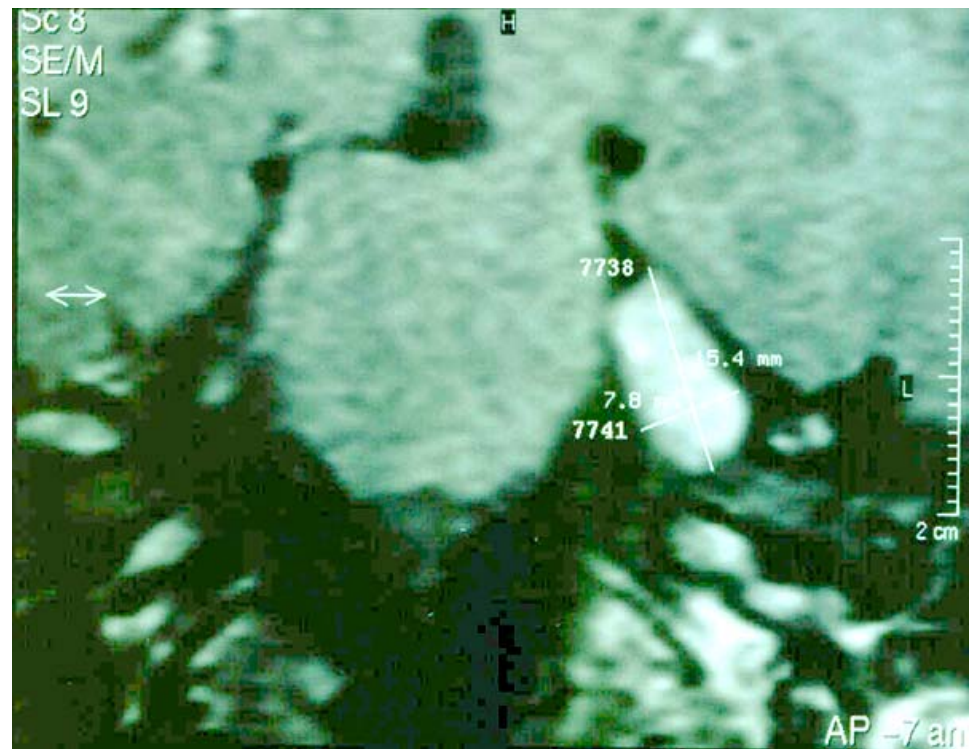
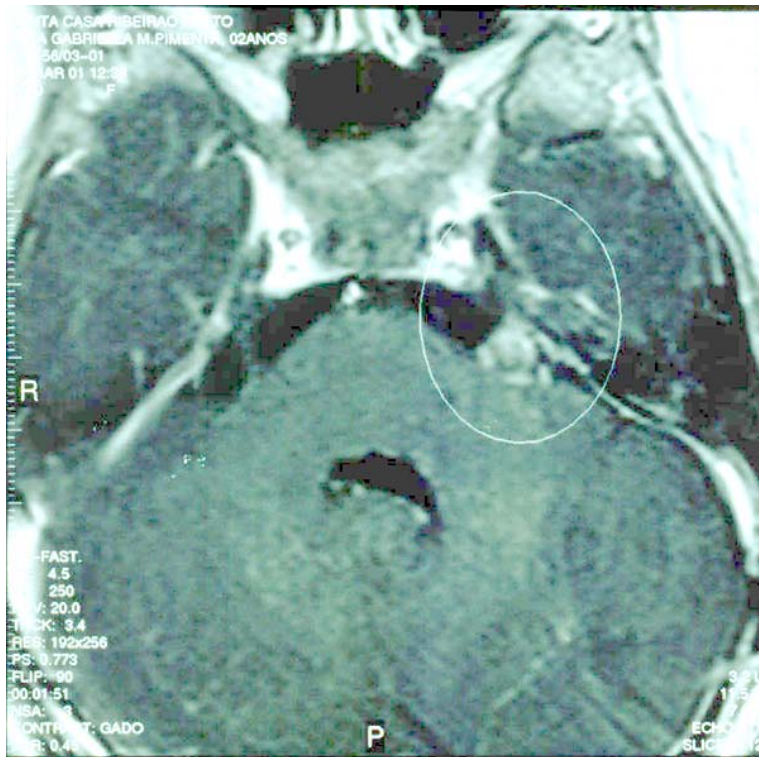
ALÍVIO DA DOR
 0 - NENHUM 1 - LEVE 2 - MODERADO 3 - COMPLETO

DATA	MANHÃ	TARDE	NOITE	SONO	MENSTRUÇÃO	MEDICAÇÃO	MEDICAÇÃO	MEDICAÇÃO	ALÍVIO DA DOR
1	XX	XX	X	Y					
2	XY	XY	XX	Y					
3	X	XXXX	XX	XX					
4	XXX	XXX	XY	XX					
5	XXI	XXI	XX	Y					
6	XXY	XXY	XXY	XX					



Secondary intermedius neuralgia-like pain in a young child

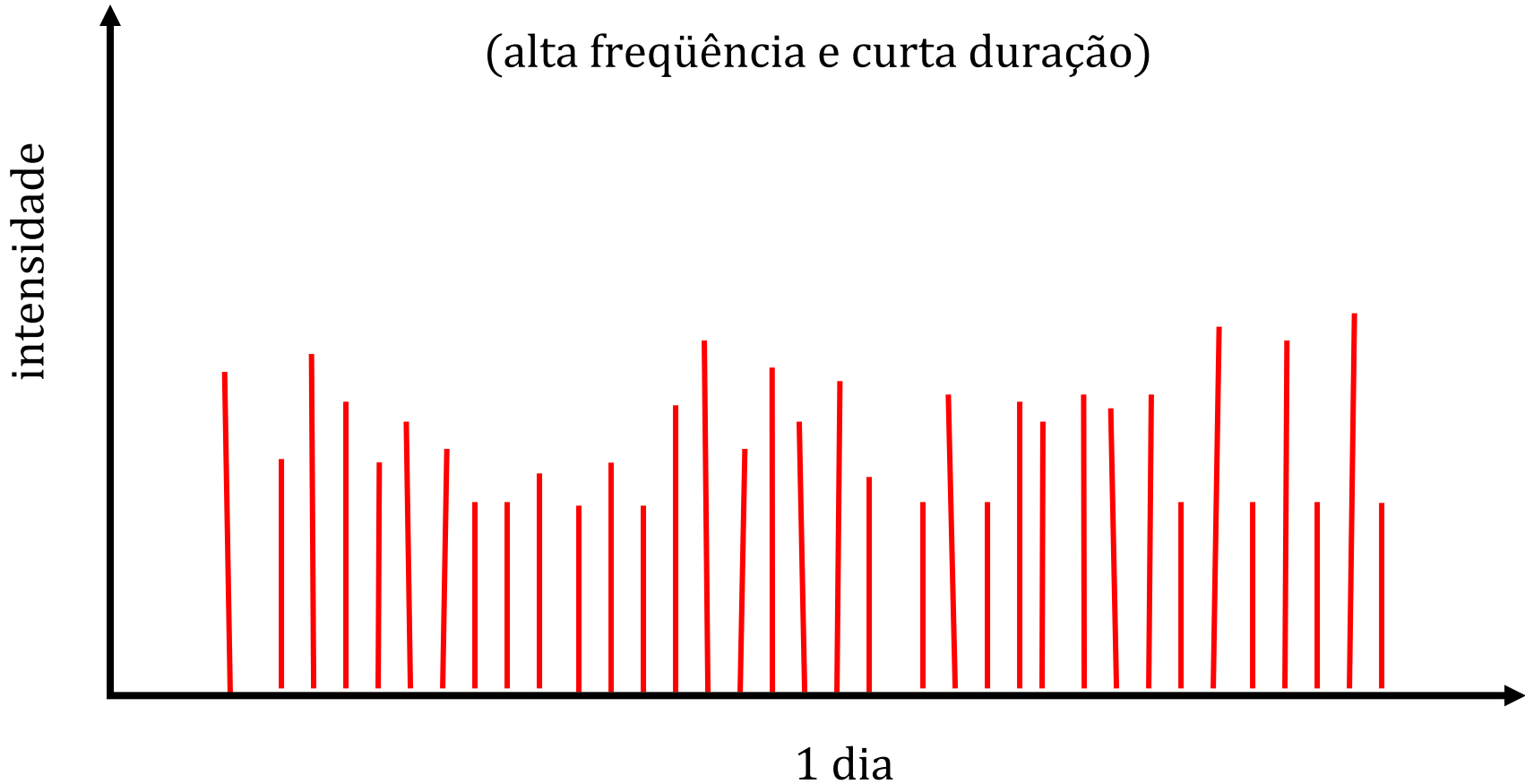
HM da Silva, JLR Bouldosa & MA Arruda



CRÔNICA RECORRENTE

Padrão Neuralgiforme

(alta freqüência e curta duração)



Padrão temporal

GSM, 4 anos, masc.

Cefaleia há 3 meses, inicialmente recorrente F 2/sem
piora progressiva há 1 mês (contínua)

GI, INC, HP-, DN+

PA+, NA+, VO++, FT+, FN+, DA+

FD: EN e chocolate

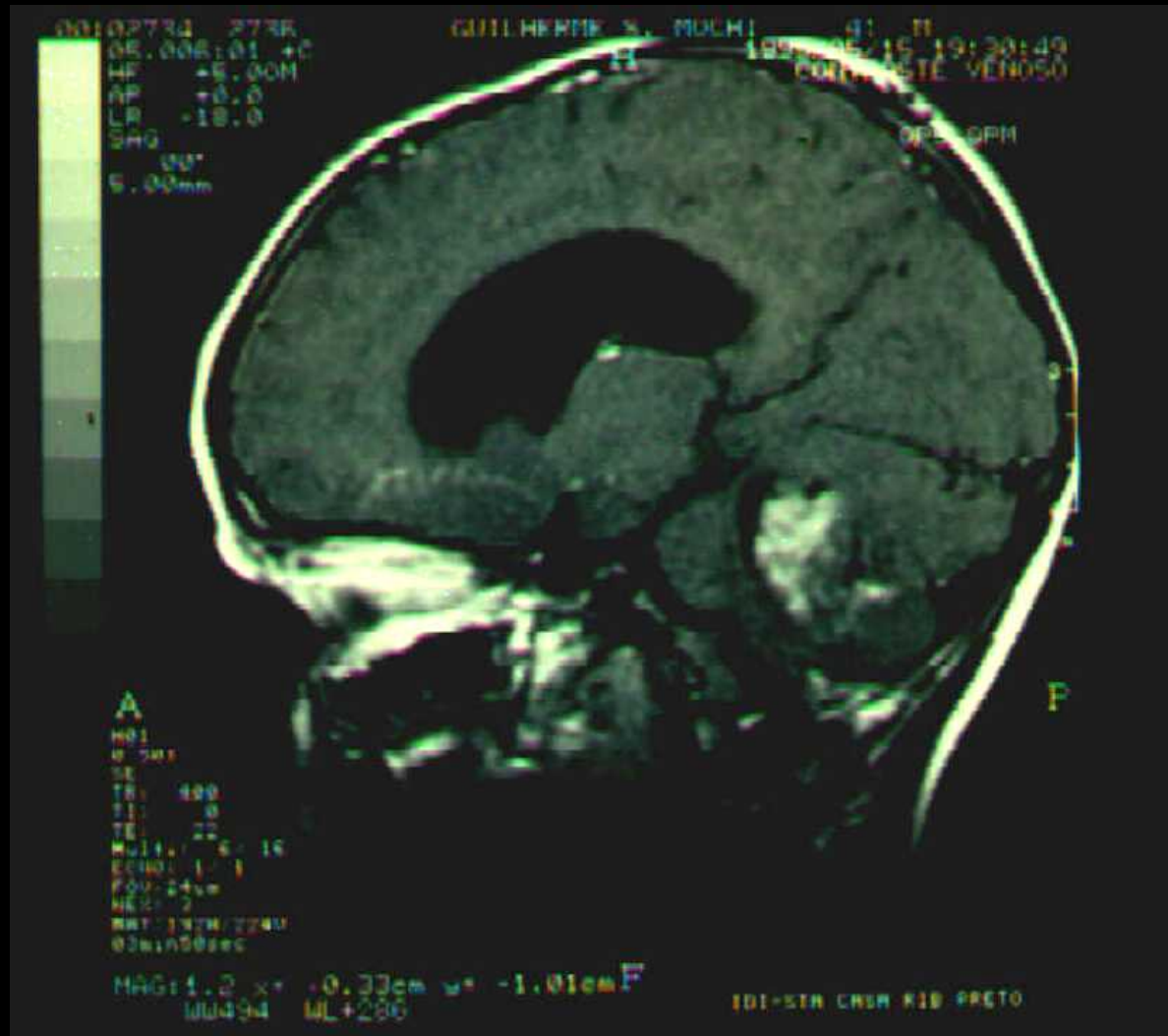
HF+++ migrânea

EN – normal

Diagnóstico Provisório: Migrânea sem Aura

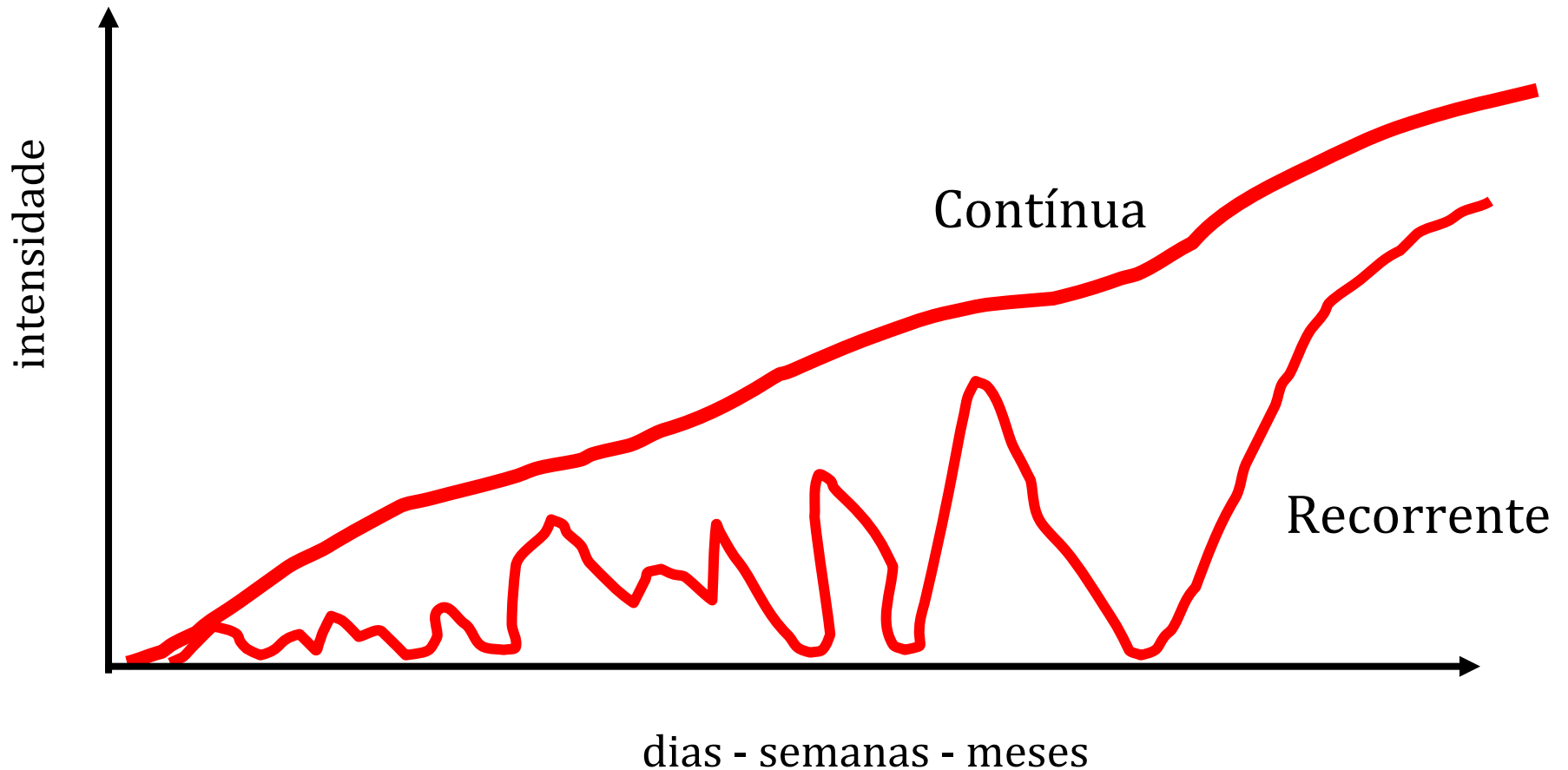
Teste terapêutico com flunarizina e retorno breve

Cefaleia Secundária a Tumor Cerebral e HIC



CRÔNICA PROGRESSIVA

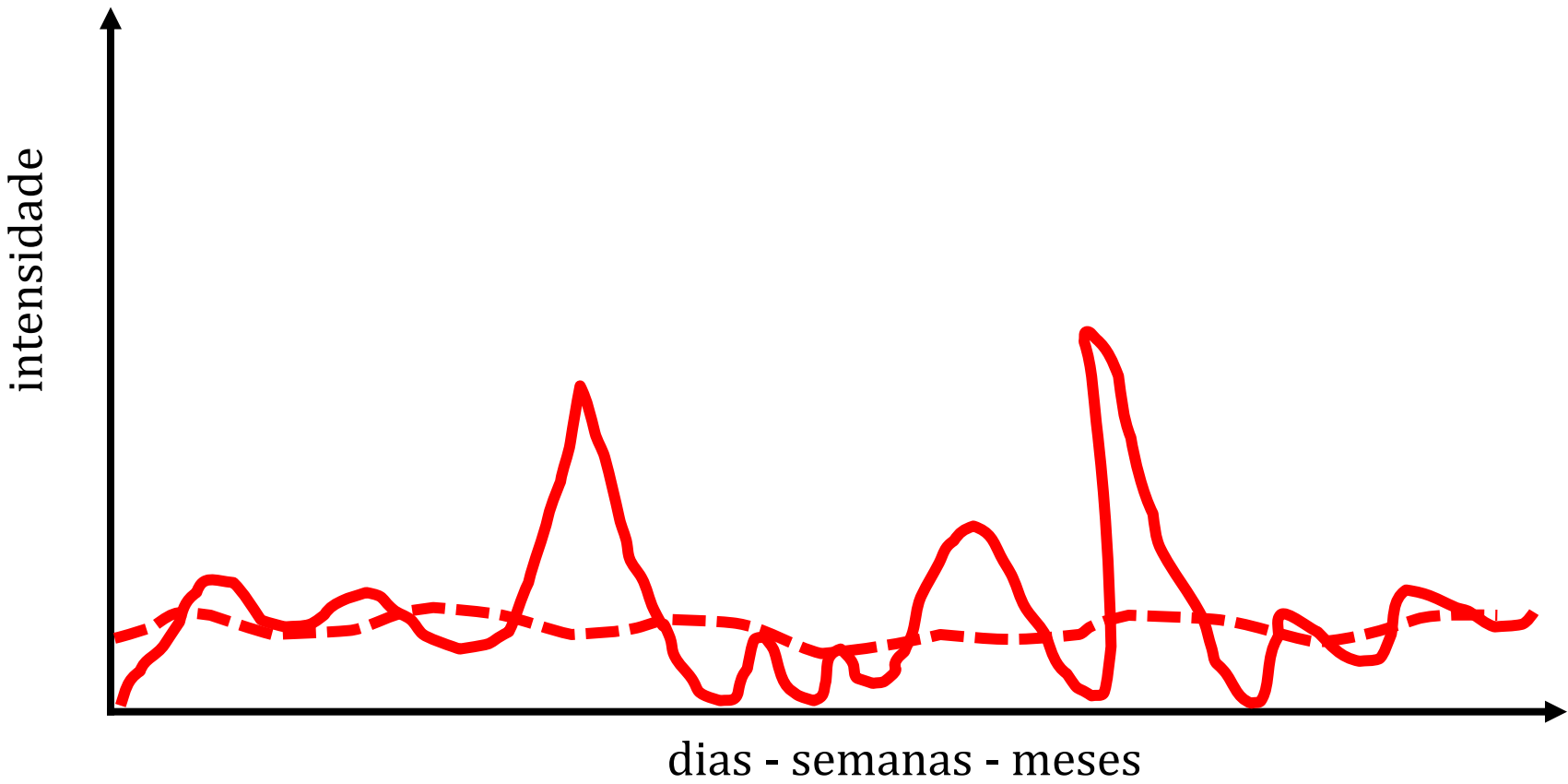
Tumor Cerebral
HIC



Padrão temporal

CRÔNICA NÃO-PROGRESSIVA

Cefaleia Crônica Diária



Padrão temporal

Migrânea Crônica associada a abuso de analgésicos

JAS, fem., 7

Setembro / 1998																																			
Dia	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26																
Madrugada																																			
Manhã		1		1				1				2	3						3	3															
Tarde	1	1	3	2		1	1	3			1	2	1	1				2	2																
Noite	2	1	2	2			1	1	2		2	1	1	1	2																				
Unilateral			X					X					X						X									X							
Bilateral	X	X		X		X	X		X		X	X		X	X			X	X					X	X		X	X							
Pressão / aperto		X		X		X	X				X			X			X																X		
Latejante / pulsátil	X		X					X	X			X	X		X				X							X									
Piora com esforço	X		X	X				X			X	X			X				X							X						X	X		
Náusea			X					X				X	X														X	X							
Vômito																															X	X			
Dor abdominal	X										X																						X		
Fotofobia			X									X	X																					X	
Fonofobia			X					X				X																							X
Aura																																			
Medicação	T	T	T	T				T	T		T		T																		T	T			
Resultado (+/-)	+			+				+			+		+		+																		+		
Fator desencadeante	X											X																						X	



1. Tempo de evolução da cefaléia < 6 meses
2. Cefaleia de evolução progressiva
3. Cefaleia incomum
4. Mudança recente no padrão da cefaleia
5. “A pior cefaleia”
6. Rebelde ao tratamento profilático
7. Associação com crises epiléticas

‘Red flags’

8. Predomínio dos vômitos sobre a cefaleia (se não alivia)
9. Horário preferencial pela noite e madrugada
10. Provocando despertar noturno
11. Desencadeada por esforço físico
12. Exame neurológico anormal
13. Declínio recente do aproveitamento escolar
14. Modificação recente do comportamento



'Red flags'



Instituto
Glia
Cognição & Desenvolvimento

USP



UNICAMP



**PROJETO
ATENÇÃO BRASIL**



Coordenação

Marco A. Arruda
Mauro de Almeida

Cefaléia

Marcelo E. Bigal
Vincenzo Guidetti
Regina C.
Albuquerque

Saúde Mental e TDAH

Maria Valeriana
Moura-Ribeiro
José H. Golfeto
Guilherme Polanczyk

TI

Felice Preziosi

Instituto Glia

Ivete A. A. C. Arruda
Flávia G. Rosseto
Karina Sanches
Lívia I. Freitas

Projeto
Nacional



Projeto
Piloto





Amostra-alvo: 2.172 crianças

Amostra final: 1906 (87,7%)

5-12 anos

Ensino Público Municipal

907 meninas (47,9%)

999 meninos (52,1%)



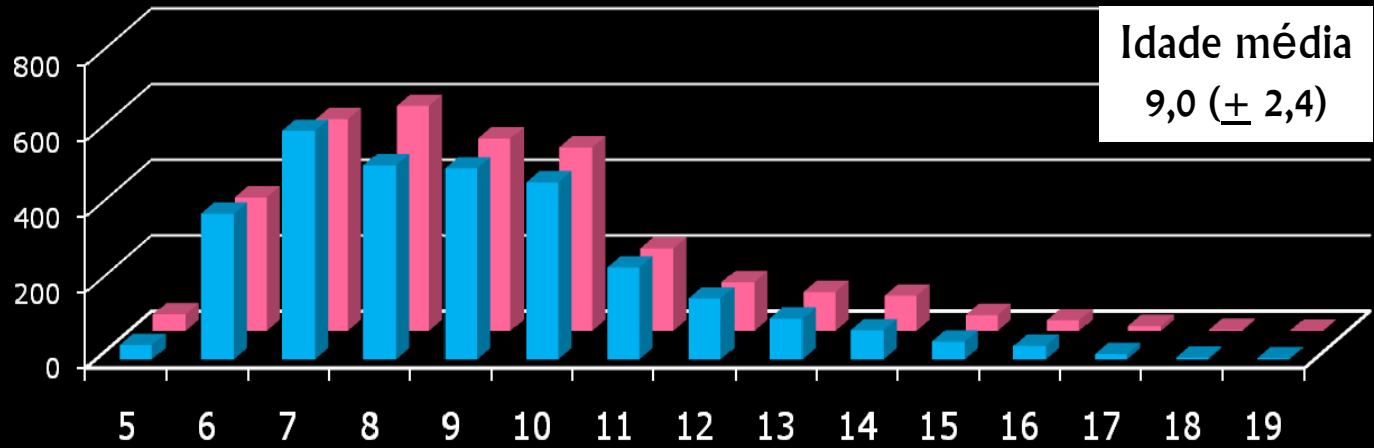
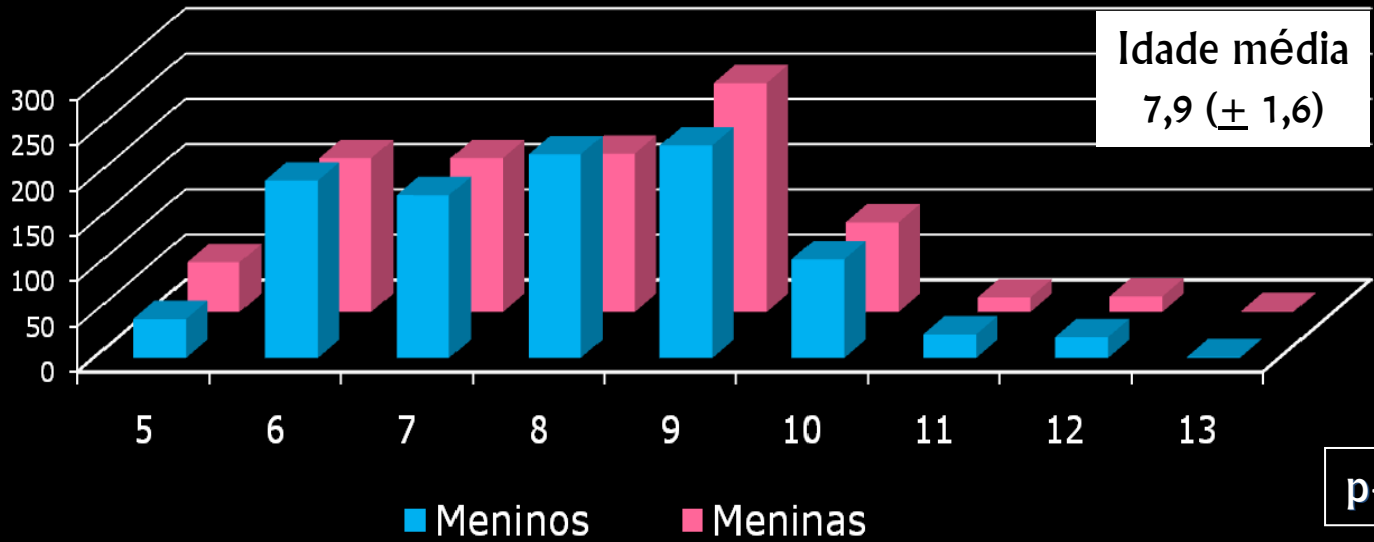


124 Professores
5 Regiões
18 Estados





ARACAJU, ALAGOA GRANDE, AMÉRICO BRASILIENSE, ANDRADINA, APIAÍ, ARAÇOIABA DA SERRA, ARAPONGAS, ARAQUARI, ARARAQUARA, AREALVA, ASSIS, ASTORGA, BARRETOS, BEBEDOURO, BELO HORIZONTE, BETIM, BRODOWSKI, CABO FRIO, CAMPINAS, CAMPO GRANDE, CAMPO LIMPO PAULISTA, CARATINGA, CAXIAS DO SUL, CERES, CODÓ, CONSELHEIRO LAFAIETE, CONTAGEM, COTIA, CRICIÚMA, CRIXAS, CRUZ DE REBOUÇAS, CRUZEIRO, CURITIBA, DISTRITO FEDERAL, DRACENA, FEIRA DE SANTANA, FERNANDÓPOLIS, FLORIANO, GALAPO, GAROPABA, GOVERNADOR VALADARES, GUARÁ, GUARIBA, IGARASSU, INÊS DANTAS, IRECÊ, ITABERABA, ITAMARAJU, JABOTICABAL, JOÃO PESSOA, JOINVILLE, JUAZEIRO DO NORTE, JUIZ DE FORA, MANAUS, MARINGÁ, MATÃO, MAUÁ, MIGUEL PEREIRA, MOCOCA, MOGI DAS CRUZES, NATAL, ORLÂNDIA, PASSOS, PEDERNEIRAS, PRESIDENTE PRUDENTE, RIO CLARO, RIO DE JANEIRO, SALVADOR, SANTA RITA DO PASSA QUATRO, SANTOS, SÃO GONÇALO, SÃO GOTARDO, SÃO JOÃO DA BOA VISTA, SÃO JOÃO DO PARAÍSO, SÃO LUIS, SÃO PAULO, SÃO SEBASTIÃO, SÃO SEBASTIÃO DO PARAÍSO, SÃO VICENTE, TAQUARA, TRÊS PONTES, TUPANCIRETÁ, UBERABA e UNAI.

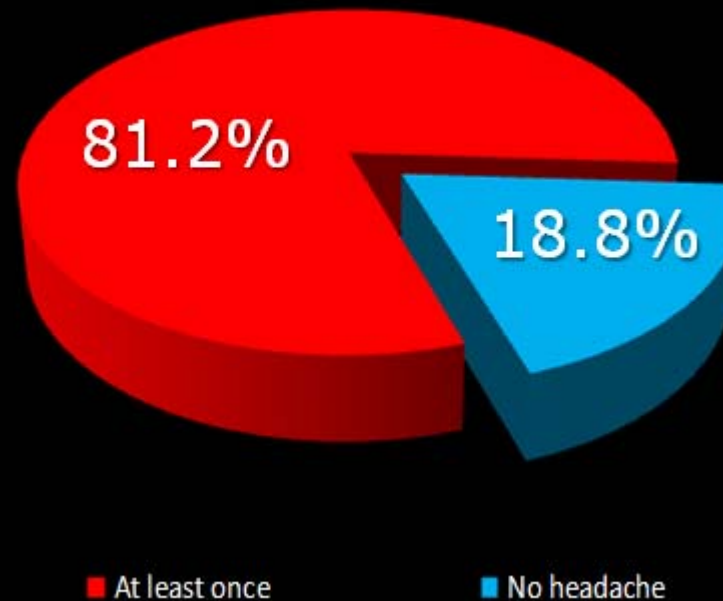




Original Article

Primary headaches in childhood – a population-based study

Marco A Arruda¹, Vincenzo Guidetti², Federica Galli², Regina CAP Albuquerque³ and Marcelo E Bigal^{4,5}

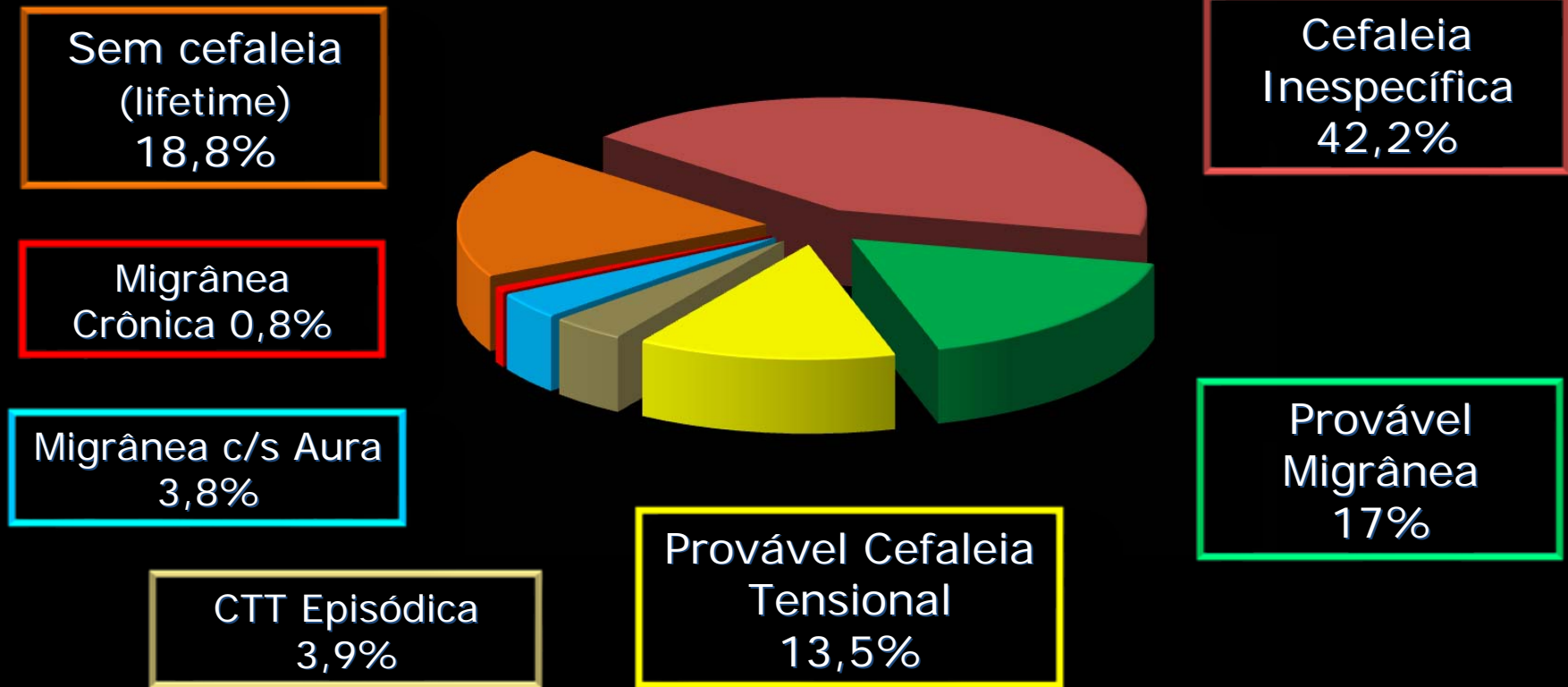




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Original Article

Primary headaches in childhood – a population-based study

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Sem cefaleia
(lifetime)
18,8%

Cefaleia
Inespecífica
42,2%

Migrânea Crônica
0,8%

Migrânea c/s Aura
3,8%

Provável Migrânea
17%

Migrânea
21,6%

Cefaleia
Tensional
17,4%

CTT Episódica
3,9%

Provável CTT
13,5%

Prevalence of primary headaches in Brazilian school-aged children – A nationwide study

Marco A. Arruda ¹, Renato Arruda ², Marcelo E. Bigal ^{3, 4}

¹ Director, Glia Institute, Ribeirao Preto, SP, Brazil; ² Graduate student, University of Campinas Medical School; ³ Global Director for Scientific Affairs - Neuroscience, Merck Research Laboratories, Whitehouse Station, NJ, U.S.; ⁴ Department of Neurology, Albert Einstein College of Medicine, Bronx, NY, U.S.

Table 2: Comparison of children and adolescents with migraine with and without aura according to age, gender, race, and income class.

	Migraine with and without aura		
	n	%	RR (95% CI)
Age			
5, 6, 7, 8	177	5,7	reference
9, 10, 11, 12	260	9,6	1.67 (1.39-2.00)
13, 14, 15, 16, 17, 18	70	12,2	2.13 (1.64-2.77)
Gender			
Female	284	8,9	1.29 (1.09-1.52)
Male	223	7,0	reference
Race			
White	350	8,1	reference
Non-white	147	8,1	1.00 (0.83-1.20)
Non-respondents	10	3,7	0.46 (0.25-0.84)
Income Class			
A, B	182	7,7	0.96 (0.74-1.26)
C	256	8,1	1.02 (0.79-1.31)
D,E	69	8,0	reference
Total	507	7,9	

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Table 3: Comparison of the headache diagnosis according to age and gender.

	Age						Gender					
	<10 years old			≥ 10 years old			female			male		
	n	%	OR (95% CI)	n	%	OR (95% CI)	n	%	RR (95% CI)	n	%	RR (95% CI)
No headache	847	20.6	reference	293	12.9	0.6 (0.5-0.7)	519	16.3	0.8 (0.8-0.9)	621	19.4	reference
Headache Unspecified	1039	25.3	reference	579	25.4	1.0 (0.9-1.1)	798	25.1	1.0 (0.9-1.1)	821	25.6	reference
1	803	19.6	reference	620	27.2	1.5 (1.4-1.7)	750	23.6	0.9 (0.8-1.0)	672	21.0	reference
1.1 + 1.2	266	6.5	reference	241	10.6	1.7 (1.4-2.1)	284	8.9	1.3 (1.1-1.5)	223	7.0	reference
1.5.1	23	0.6	reference	13	0.6	1.0 (0.5-2.0)	20	0.6	1.3 (0.7-2.4)	16	0.5	reference
1.6	514	12.5	reference	366	16.1	1.3 (1.2-1.5)	447	14.1	1.0 (0.9-1.2)	433	13.5	reference
2	1417	34.5	reference	785	34.5	1.0 (0.9-1.1)	1109	34.9	1.0 (0.9-1.1)	1093	34.1	reference
2.1	416	10.1	reference	188	8.3	0.8 (0.7-0.9)	281	8.8	0.9 (0.7-1.0)	323	10.1	reference
2.2	32	0.8	reference	28	1.2	1.6 (0.9-2.6)	36	1.1	1.5 (0.9-2.5)	24	0.7	reference
2.3	1	0.0	reference	0	0.0	-	0	0.0	-	1	0.0	reference
2.4	968	23.6	reference	569	25.0	1.1 (1.0-1.2)	792	24.9	1.1 (1.0-1.2)	745	23.2	reference
Total	4106			2277			3176			3207		

1: migraine; 1.1+1.2: migraine with and without aura; 1.5.1: chronic migraine; 1.6: probable migraine; 2: tension-type headache (TTH); 2.1: infrequent episodic TTH; 2.2: frequent episodic TTH; 2.3: chronic TTH; 2.4: probable TTH.

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Table 4: Comparison of the headache diagnosis between females and males younger and older than 10 years-old.

	Female, aged < 10 anos			Male, aged < 10 anos			Female, aged ≥ 10 anos			Male, aged ≥ 10 anos		
	n	%	RR (95% CI)	n	%	RR (95% CI)	n	%	RR (95% CI)	n	%	RR (95% CI)
No headache	396	19.2	0.9 (0.8-0.9)	451	22.1	reference	123	11.0	0.7 (0.6-0.9)	170	14.6	reference
Headache Unspecified	530	25.7	1.0 (0.9-1.1)	510	24.9	reference	268	24.0	0.9 (0.8-1.0)	311	26.8	reference
1	412	20.0	1.0 (0.9-1.2)	390	19.1	reference	338	30.3	1.2 (1.1-1.4)	282	24.3	reference
1.1 + 1.2	145	7.0	1.2 (0.9-1.5)	121	5.9	reference	139	12.5	1.4 (1.1-1.8)	102	8.8	reference
1.5.1	13	0.6	1.3 (0.6-2.9)	10	0.5	reference	7	0.6	1.2 (0.4-3.6)	6	0.5	reference
1.6	255	12.4	1.0 (0.8-1.1)	259	12.7	reference	192	17.2	1.1 (0.9-1.4)	174	15.0	reference
2	723	35.1	1.0 (0.9-1.1)	694	33.9	reference	386	34.6	1.0 (0.9-1.1)	399	34.3	reference
2.1	206	10.0	1.0 (0.8-1.2)	210	10.3	reference	75	6.7	0.7 (0.5-0.9)	113	9.7	reference
2.2	18	0.9	1.3 (0.6-2.6)	14	0.7	reference	18	1.6	1.9 (0.9-4.0)	10	0.9	reference
2.3	0	0.0	-	1	0.0	reference	0	0.0	-	0	0.0	reference
2.4	499	24.2	1.1 (0.9-1.2)	469	22.9	reference	293	26.3	1.1 (0.9-1.3)	276	23.8	reference
Total	2061			2045			1115			1162		

1: migraine; 1.1+1.2: migraine with and without aura; 1.5.1: chronic migraine; 1.6: probable migraine; 2: tension-type headache (TTH); 2.1: infrequent episodic TTH; 2.2: frequent episodic TTH; 2.3: chronic TTH; 2.4: probable TTH.

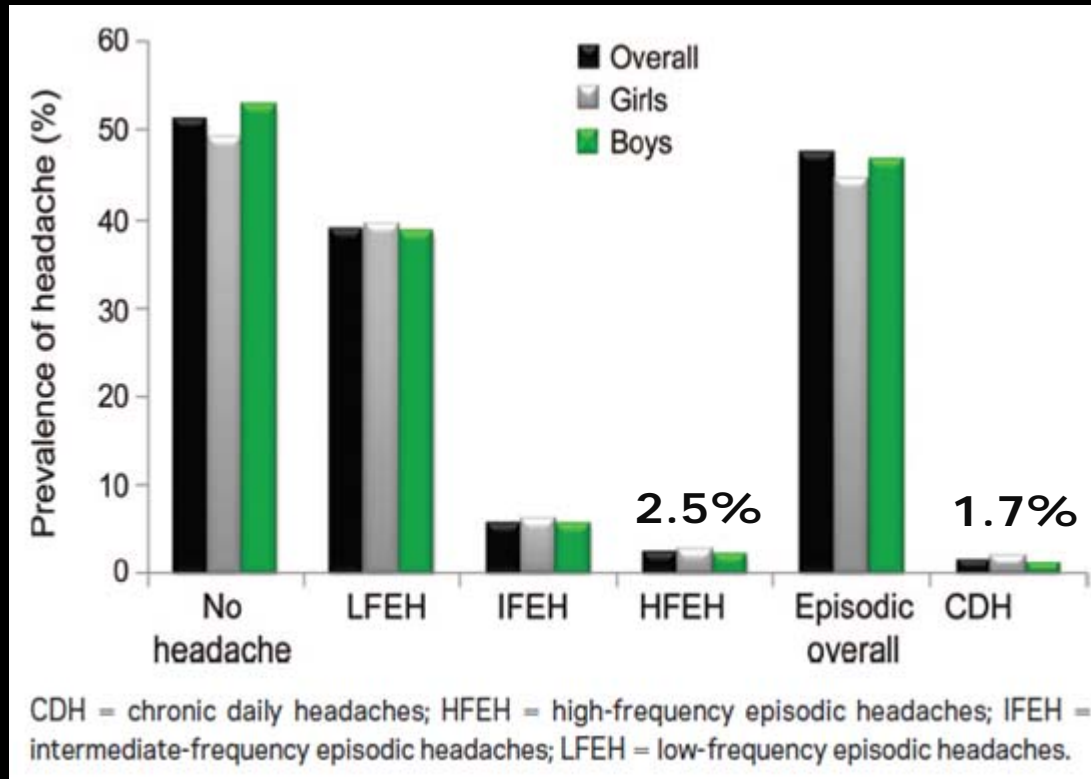


Frequent headaches in the preadolescent pediatric population

A population-based study

MA Arruda, V Guidetti, F Galli, RCAP Albuquerque, ME Bigal

4.2%
>10
days/month



Frequent headaches in Brazilian school-aged children – a nationwide study

Marco A. Arruda¹, Renato Arruda², Marcelo E. Bigal^{3,4}

¹ Director, Glia Institute, Ribeirao Preto, SP, Brazil; ² Graduate student, University of Campinas Medical School; ³ Global Director for Scientific Affairs - Neuroscience, Merck Research Laboratories, Whitehouse Station, NJ, U.S.; ⁴ Department of Neurology, Albert Einstein College of Medicine, Bronx, NY, U.S.

Table 2: Prevalence of high frequency headache, chronic daily headaches and chronic migraine by age, gender, and race.

Age	Overall	Chronic Migraine			HFEH			CDH			HFEH+CDH		
	n	n	%	RR (95% CI)	n	%	RR (95% CI)	n	%	RR (95% CI)	n	%	RR (95% CI)
5, 6, 7	1984	9	0.5	reference	20	1.0	reference	13	0.7	reference	33	1.7	reference
8, 9, 10	3075	19	0.6	1.4 (0.6-3.0)	49	1.6	1.6 (0.9-2.6)	32	1.0	1.6 (0.8-3.0)	81	2.6	1.6 (1.1-2.4)
11, 12, 13	962	6	0.6	1.4 (0.5-3.8)	15	1.6	1.5 (0.8-3.0)	12	1.2	1.9 (0.9-4.2)	27	2.8	1.9 (1.0-2.8)
14, 15, 16+	362	2	0.6	1.2 (0.3-5.6)	10	2.8	2.7 (1.3-5.8)	8	2.2	3.4 (1.4-8.1)	18	5.0	3.0 (1.7-5.2)
Gender													
Female	3176	20	0.6	1.3 (0.6-2.4)	59	1.9	1.7 (1.1-2.6)	33	1.0	1.0 (0.6-1.7)	92	2.9	1.4 (1.0-1.9)
Male	3207	16	0.5	reference	35	1.1	reference	32	1.0	reference	67	2.1	reference
Race													
White	4307	22	0.5	reference	62	1.4	reference	35	0.8	reference	97	2.3	reference
Non-white	1806	11	0.6	1.2 (0.6-2.4)	28	1.6	1.1 (0.7-1.7)	26	1.4	1.8 (1.1-2.9)	54	3.0	1.3 (1.0-1.8)
Non-respondents	270	3	1.1	2.2 (0.6-7.2)	4	1.5	1.0 (0.4-2.8)	4	1.5	1.8 (0.6-5.1)	8	3.0	1.3 (0.6-2.7)
Income Class													
A, B	2369	19	0.8	2.3 (0.7-7.8)	26	1.1	reference	34	1.4	1.8 (0.8-4.0)	60	2.5	1.0 (0.6-1.6)
C	3147	14	0.4	1.3 (0.4-4.5)	53	1.7	1.5 (1.0-2.4)	24	0.8	0.9 (0.4-2.2)	77	2.4	1.0 (0.6-1.5)
D,E	867	3	0.3	reference	15	1.7	1.6 (0.8-3.0)	7	0.8	reference	22	2.5	reference
Total	6383	36	0.6		94	1.5		65	1.0		159	2.5	

HFEH (high frequency episodic headaches): from 10-14 days of headache in the past month; CDH (chronic daily headaches): 15 or more headaches in the past month.

Frequent headaches in Brazilian school-aged children – a nationwide study

Marco A. Arruda¹, Renato Arruda², Marcelo E. Bigal^{3,4}

¹ Director, Glia Institute, Ribeirao Preto, SP, Brazil; ² Graduate student, University of Campinas Medical School; ³ Global Director for Scientific Affairs - Neuroscience, Merck Research Laboratories, Whitehouse Station, NJ, U.S.; ⁴ Department of Neurology, Albert Einstein College of Medicine, Bronx, NY, U.S.

Based on our findings we estimate that **1.7 millions of children and adolescents in Brazil have 10 or more days of headache per month.** Health care providers and educators be aware of the magnitude of the problem, in order to properly identify and treat children with chronic headaches.

Frequent headaches in Brazilian school-aged children – a nationwide study

Marco A. Arruda ¹, Renato Arruda ², Marcelo E. Bigal ^{3, 4}

¹ Director, Glia Institute, Ribeirao Preto, SP, Brazil; ² Graduate student, University of Campinas Medical School; ³ Global Director for Scientific Affairs - Neuroscience, Merck Research Laboratories, Whitehouse Station, NJ, U.S.; ⁴ Department of Neurology, Albert Einstein College of Medicine, Bronx, NY, U.S.

Table 3: Number of days of analgesic intake in the last month according to the headache frequency.

Number of days	LFEH+IFEH		HFEH				CDH			
	n	%	n	%	RR (95% CI)	p	n	%	RR (95% CI)	p
0 to 1	1508	57.0	21	24.4	reference		5	7.7	reference	
2 to 9	1110	42.0	39	45.3	0.98 (0.97-0.99)	0.0008	25	38.5	0.98 (0.97-0.99)	<0.0001
≥ 10	26	1.0	26	30.2	0.50 (0.39-0.66)	<0.0001	35	53.8	0.43 (0.32-0.57)	<0.0001

LFEH (low frequency episodic headache): 0-4 days of headache in the past month; IFEH (intermediate frequency episodic headache): 5-9 days of headache in the past month; HFEH (high frequency episodic headaches): from 10-14 days of headache in the past month; CDH (chronic daily headaches): 15 or more headaches in the past month.



Heterogeneidade das crises

RAS, masc., 4: Migrânea sem Aura

Junho / 1999																																					
Dia	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	S												
Madrugada					2																													2			
Manhã					3							1																							4		
Tarde	2										2		1	1																		2		8			
Noite	3																																		3		
Unilateral	X					X																											X				
Bilateral						X						X	X	X	X																						
Pressão / aperto												X	X	X	X																						
Latejante / pulsátil	X					X						X	X	X	X																			X			
Piora com esforço	X					X						X	X	X	X																				X		
Náusea	X					X						X																							X		
Vômito	X																																				
Dor abdominal				X		X						X	X		X					X														X			
Fotofobia	X					X						X	X																						X		
Fonofobia	X					X						X			X																					X	
Aura																																					
Medicação	B					B																															
Resultado (+/-)	+					-																															
Fator desencadeante	X					X																															
Dores nas pernas	X													X																							

1.1

1.1

1.6+2.1

1.1

Heterogeneidade das crises

JAS, fem., 7: Cefaléia do Tipo Tensional Episódica

Setembro / 1998	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Dia																			
Madrugada																			
Manhã								1											
Tarde	1			2							1		1	1					2
Noite	2										2								
Unilateral																			
Bilateral	X			X				X			X		X	X					X
Pressão / aperto	X			X				X			X		X	X					X
Latejante / pulsátil																			
Piora com esforço	X										X								X
Náusea																			
Vômito																			
Dor abdominal	X										X								X
Fotofobia																			
Fonofobia	X										X								X
Aura																			
Medicação	T										T								
Resultado (+/-)	+										+								
Fator desencadeante	X										X								X
Perda do apetite	X																		X

1.6+2.1 2.1 2.1 2.1 1.6+2.1 1.6+2.1 1.6+2.1

Fatores desencadeantes: provas escolares e exposição prolongada ao sol





Changing headache from preschool age to puberty. A controlled study

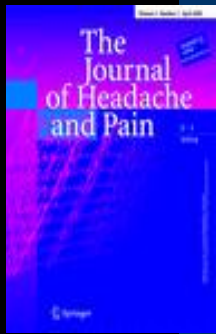
R Virtanen¹, M Aromaa^{1,2}, P Rautava², L Metsähonkala³, P Anttila², H Helenius⁴ & M Sillanpää^{1,3}

¹Department of Public Health, University of Turku, ²Turku City Hospital and Departments of ³Paediatric Neurology and ⁴Biostatistics, University of Turku, Turku, Finland

Estudo epidemiológico longitudinal, Finlândia, 1.132 famílias de crianças 6 anos
Crianças com história de cefaléia nos últimos 6 meses e controles
Avaliados aos 6 e aos 13 anos de idade

Table 1 Changes in the headache types of 90 index children (headache at age of 6) and 91 control children (headache free) from age of 6 to 13 years

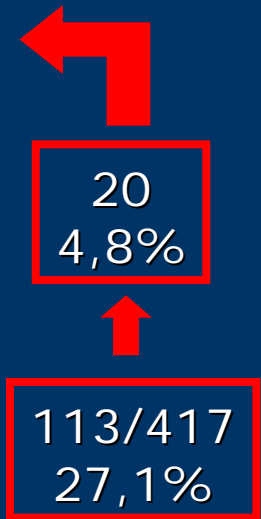
Headache type at age 6	Headache type at age 13			Total
	Migraine	Tension-type	Headache-free	
Migraine	28 (53%)	17 (32%)	8 (15%)	53 (100%)
Tension-type	14 (38%)	13 (35%)	10 (27%)	37 (100%)
Both types of headache	42 (47%)	30 (33%)	18 (20%)	90 (100%)
Controls	5 (5%)	7 (8%)	79 (87%)	91 (100%)

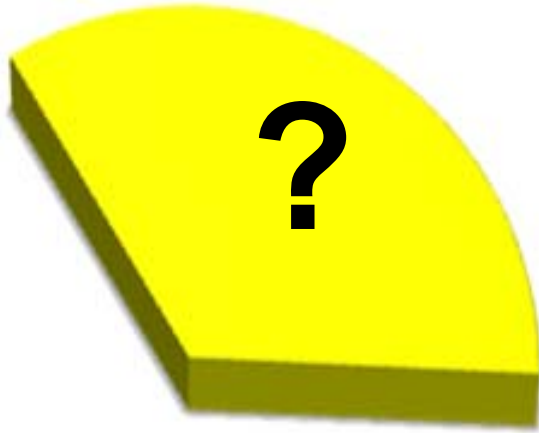


Decreasing the minimal duration of the attack to 1 hour:
is this sufficient to increase the sensitivity of the ICHD-II
diagnostic criteria for migraine in childhood?

Arruda MA, Bordini CA, Ciciarelli MC, Speciali JG

Diagnosis	ICHD-II		LICD	
	n	%	n	%
Migraine without aura (1.1)	122	29.3	236	56.6
Migraine with aura (1.2)	114	27.3	151	36.2
Probable migraine without aura (1.6.1)	44	10.5	-	-
Probable migraine with aura (1.6.2)	18	4.3	-	-
Frequent episodic tension-type headache (2.2)	33	7.9	15	3.6
Chronic tension-type headache (2.3)	7	1.7	5	1.2
Probable frequent episodic tension-type headache (2.4.2)	31	7.4	-	-
Probable migraine plus probable tension-type headache *	42	10.1	→	
Primary stabbing headache (4.1)	1	0.2	1	0.2
Chronic post-traumatic headache (5.2)	1	0.2	1	0.2
Headache attributed to increased intracranial pressure or hydrocephalus caused by neoplasm (7.4.1)	1	0.2	1	0.2
Exogenous hormone-induced headache (8.3.1)	2	0.5	2	0.5
Headache unspecified (14.2)	1	0.2	5	1.2
Total	417	100	417	100





Provável Cefaleia
do Tipo Tensional?
n=2.202 (34,5%)

2.4 Probable TTH

2.4.1 Probable infrequent episodic TTH

- A. Episodes fulfilling all but one of criteria A-D for
2.1 *Infrequent episodic tension-type headache*
- B. Episodes do not fulfil criteria for
1.1 *Migraine without aura*
- C. Not attributed to another disorder

2.4.2 Probable frequent episodic TTH

- A. Episodes fulfilling all but one of criteria A-D for
2.2 *Frequent episodic tension-type headache*
- B. Episodes do not fulfil criteria for
1.1 *Migraine without aura*
- C. Not attributed to another disorder

ICHD-II. *Cephalalgia* 2004; 24 (Suppl 1) ©International Headache Society 2003/4

	n	%
Unilateral	639	29,9
Pulsátil	380	17,3
Piora com Esforço	1013	46,0
Náuseas	273	12,4
Vômitos	125	5,7
Náuseas e Vômito	97	4,4
Fotofobia	231	10,5
Fonofobia	646	29,3
Foto e Fonofobia	104	4,7

Cefaléia do
Tipo Tensional

2.4.2

2.4.1

1.6.1

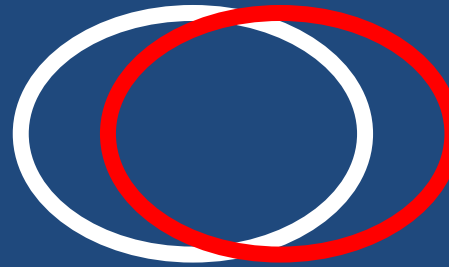
1.6.2

Migrânea



Infância

Cefaléia do
Tipo Tensional

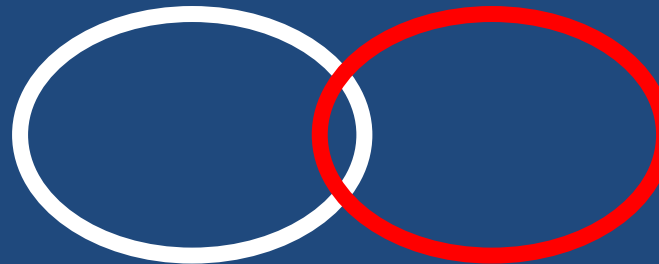


Migrânea



Adulthood

Cefaléia do
Tipo Tensional



Migrânea





Childhood Periodic Syndromes: A Population-Based Study

Marco A. Arruda, MD, PhD*, Vincenzo Guidetti, MD[†], Federica Galli, PhD[‡],
Regina C. A. P. Albuquerque, MD, MSci[‡], and Marcelo E. Bigal, MD, PhD^{§||}

	<u>No Headaches</u>		<u>Episodic Migraine</u>		
	<i>n</i>	Prevalence, %	<i>n</i>	Prevalence, %	RR (95% CI)
Motion sickness	60	16.0	25	33.3	2.1 (1.4-3.1)
Limb pain	45	12.0	47	62.6	5.2 (3.7-7.2)
Abdominal pain	86	22.9	44	58.6	2.6 (1.9-3.3)
Sleep talking	89	23.7	41	54.6	2.3 (1.7-3.0)
Bruxism	69	18.4	33	44.0	2.4 (1.7-3.3)
Somnambulism	41	10.9	27	36.0	3.4 (2.2-5.1)
Nocturnal enuresis	33	8.8	11	14.6	1.6 (0.9-3.1)



Childhood Periodic Syndromes: A Population-Based Study

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Tension-type headache

Symptom	<i>n</i>	Prevalence (%)	RR (95% CI)
Motion sickness	51	16.6	1.0 (0.7-1.4)
Limb pain	97	31.6	2.6 (1.9-3.3)
Abdominal pain	144	46.9	2.0 (1.6-2.5)
Sleep talking	104	33.9	1.4 (1.1-1.8)
Bruxism	80	26.1	1.4 (1.0-1.8)
Somnambulism	63	20.5	1.9 (1.3-2.7)
Nocturnal enuresis	31	10.1	1.1 (0.7-1.8)

Behavior and emotional correlates of primary headaches in children - a population-based study

Marco A. Arruda¹, Renato Arruda², Marcelo E. Bigal^{3,4}

¹ Director, Glia Institute, Ribeirao Preto, SP, Brazil; ² Graduate student, University of Campinas Medical School; ³ Global Director for Scientific Affairs - Neuroscience, Merck Research Laboratories, Whitehouse Station, NJ, U.S.; ⁴ Department of Neurology, Albert Einstein College of Medicine, Bronx, NY, U.S.

Table 3: Prevalence of clinical impairment in different CBCL symptoms scales between children with Migraine, Tension-type headache and controls.

CBCL Scales	No Headache		Migraine Overall			Strict Migraine			Tension-Type Headache Overall			Strict Tension-Type headache		
	n	%	n	%	RR (95% CI)	n	%	RR (95% CI)	n	%	RR (95% CI)	n	%	RR (95% CI)
<i>Whithdrawn</i>	22	6.4	29	6.8	1.1 (0.6-1.8)	6	5.1	0.8 (0.3-1.9)	40	7.4	1.2 (0.7-1.9)	7	7.4	1.2 (0.5-2.6)
<i>Somatic</i>	10	2.9	93	21.8	7.5 (4.0-14.2)	31	26.3	9.1 (4.6-18.0)	47	8.8	3.0 (1.5-5.9)	10	10.5	3.6 (1.6-8.5)
<i>Anxiety-Depressive</i>	12	3.5	64	15.0	4.3 (2.4-7.8)	24	20.3	5.8 (3.0-11.3)	40	7.4	2.1 (1.1-4.0)	10	10.5	3.0 (1.4-6.8)
<i>Social</i>	18	5.2	40	9.4	1.8 (1.0-3.1)	14	11.9	2.3 (1.2-4.4)	36	6.7	1.3 (0.7-2.2)	9	9.5	1.8 (0.8-3.9)
<i>Thought</i>	9	2.6	16	3.7	1.4 (0.6-3.2)	3	2.5	1.0 (0.3-3.5)	25	4.7	1.7 (0.8-3.8)	2	2.1	0.8 (0.2-3.7)
<i>Attention</i>	22	6.4	73	17.1	2.6 (1.7-4.2)	21	17.8	2.8 (1.6-4.9)	55	10.2	1.6 (1.0-2.6)	14	14.7	2.3 (1.2-4.3)
<i>Delinquent</i>	17	4.9	29	6.8	1.4 (0.8-2.5)	6	5.1	1.0 (0.4-2.6)	28	5.2	1.1 (0.6-1.9)	3	3.2	0.6 (0.2-2.1)
<i>Aggressive</i>	12	3.5	15	3.5	1.0 (0.5-2.1)	2	1.7	0.5 (0.1-2.1)	23	4.3	1.2 (0.6-2.4)	4	4.2	1.2 (0.4-3.7)
<i>Internalizing</i>	66	19.1	219	51.3	2.7 (2.1-3.4)	67	56.8	3.0 (2.3-3.9)	200	37.2	1.9 (1.5-2.5)	38	40.0	2.1 (1.5-2.9)
<i>Externalizing</i>	53	15.4	73	17.1	1.1 (0.8-1.5)	15	12.7	0.8 (0.5-1.4)	89	16.6	1.1 (0.8-1.5)	19	20.0	1.3 (0.8-2.1)
<i>Total</i>	50	14.5	140	32.8	2.3 (1.7-3.0)	43	36.4	2.5 (1.8-3.6)	126	23.5	1.6 (1.2-2.1)	25	26.3	1.8 (1.2-2.8)

Behavior and emotional correlates of primary headaches in children - a population-based study

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Table 4: Prevalence of ADHD, hyperactivity-impulsivity and inattention as a function of headache diagnosis.

	Total n	ADHD			Hyperactivity-Impulsivity			Inattention		
		n	Prevalence	RR (95% CI)	n	Prevalence	RR (95% CI)	n	Prevalence	RR (95% CI)
No headache	345	23	6.7	reference	28	8.1	reference	27	7.8	reference
Migraine Overall	427	31	7.3	1.1 (0.6-1.8)	85	19.9	2.5 (1.6-3.7)	50	11.7	1.5 (1.0-2.3)
Strict Migraine	118	11	9.3	1.4 (0.7-2.8)	28	23.7	2.9 (1.8-4.7)	15	12.7	1.6 (0.9-2.9)
Tension-type Headache Overall	537	24	4.5	0.7 (0.4-1.2)	73	13.6	1.7 (1.1-2.5)	53	9.9	1.3 (0.8-2.0)
Strict Tension-type Headache	95	3	3.2	0.5 (0.1-1.5)	14	14.7	1.8 (1.0-3.3)	8	8.4	1.1 (0.5-2.3)

School achievement and absenteeism in school-aged children with primary headache - a Nationwide Study

Marco A. Arruda¹, Renato Arruda², Marcelo E. Bigal^{3,4}

¹ Director, Glia Institute, Ribeirao Preto, SP, Brazil; ² Graduate student, University of Campinas Medical School; ³ Global Director for Scientific Affairs - Neuroscience, Merck Research Laboratories, Whitehouse Station, NJ, U.S.; ⁴ Department of Neurology, Albert Einstein College of Medicine, Bronx, NY, U.S.

Table 1: Prevalence and relative risk of 'below average' school achievement in children with tension-type headache, migraine, LFEH/IFEH and HFEH/CDH comparing to controls (no headache).

	'Below average' school achievement				
	%	RR (95% CI)	p	RR (95% CI)	p
No headache	28.0	reference	-	-	-
TTH	26.2	0.9 (0.8-1.0)	0.30	reference	-
Migraine	30.2	1.1 (0.9-1.2)	0.22	1.1 (1.0-1.3)	0.01
LFEH/IFEH	28.7	1.0 (0.9-1.1)	0.63	reference	-
HFEH/CDH	38.4	1.4 (1.1-1.7)	0.009	1.3 (1.1-1.6)	0.01

TTH: tension-type headache; LFEH (low frequency episodic headache): less than 5 days of headache in the past month; IFEH (intermediate frequency episodic headache): from 5 to 9 days of headache in the past month; HFEH (high frequency episodic headaches): from 10-14 days of headache in the past month; CDH (chronic daily headaches): 15 or more headaches in the past month.

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Table 2: Prevalence and relative risk of 'headache in the classroom' in children with migraine comparing to children with tension-type headache, and children with HFEH/CDH comparing to children with LFEH/IFEH.

	Headache in the classroom in the last 6 months											
	Never			1 day			2 to 5 days			> 5 days		
	%	RR (95% CI)	p	%	RR (95% CI)	p	%	RR (95% CI)	p	%	RR (95% CI)	p
TTH	63.0	reference		32.3	reference		10.8	reference		1.5	reference	
Migraine	57.2	0.9 (0.8-0.9)	<0.001	38.5	1.2 (1.1-1.3)	<0.001	14.4	1.3 (1.1-1.6)	0.001	3.7	2.4 (1.5-3.6)	<0.0001
LFEH/IFEH	62.2	reference		32.9	reference		12.0	reference		2.1	reference	
HFEH/CDH	50.3	0.8 (0.7-0.9)	0.003	45.9	1.4 (1.2-1.7)	0.0009	22.6	1.9 (1.4-2.5)	<0.0001	5.0	2.4 (1.2-4.8)	0.03

TTH: tension-type headache; LFEH (low frequency episodic headaches): less than 5 days in the past month; IFEH (intermediate frequency episodic headaches): from 5 to 9 days of headache in the past month; HFEH (high frequency episodic headaches): from 10 to 14 days of headache in the past month; CDH (chronic daily headaches): 15 or more days of headache in the past month.

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Marco A. Arruda¹, Renato Arruda², Marcelo E. Bigal^{3,4}

¹ Director, Glia Institute, Ribeirao Preto, SP, Brazil; ² Graduate student, University of Campinas Medical School; ³ Global Director for Scientific Affairs - Neuroscience, Merck Research Laboratories, Whitehouse Station, NJ, U.S.; ⁴ Department of Neurology, Albert Einstein College of Medicine, Bronx, NY, U.S.

Table 3: Prevalence and relative risk of 'dismissing from school due to headache' in children with migraine comparing to children with tension-type headache, and children with HFEH/CDH comparing to children with LFEH/IFEH.

	Dismissed from school due to headache in the last 6 months											
	Never			1 day			2 to 5 days			> 5 days		
	%	RR (95% CI)	p	%	RR (95% CI)	p	%	RR (95% CI)	p	%	RR (95% CI)	p
TTH	81.5	reference		13.0	reference		4.1	reference		0.3	Reference	
Migraine	76.4	0.9 (0.9-1.0)	0.0003	18.5	1.4 (1.2-1.6)	<0.0001	6.0	1.5 (1.1-1.9)	0.01	0.4	1.3 (0.4-3.9)	0.82
LFEH/IFEH	79.9	reference		14.4	reference		4.6	reference		0.3	Reference	
HFEH/CDH	69.2	0.9 (0.8-1.0)	0.001	26.4	1.8 (1.4-2.4)	<0.0001	7.5	1.6 (0.9-2.9)	0.12	1.9	6.0 (1.8-20.5)	0.009

TTH: tension-type headache; LFEH (low frequency episodic headaches): less than 5 days in the past month; IFEH (intermediate frequency episodic headaches): from 5 to 9 days of headache in the past month; HFEH (high frequency episodic headaches): from 10 to 14 days of headache in the past month; CDH (chronic daily headaches): 15 or more days of headache in the past month.

Table 4: Prevalence and relative risk of 'missing school days due to headache' in children with migraine comparing to children with tension-type headache, and children with HFEH/CDH comparing to children with LFEH/IFEH.

	School days missed due to headache in the last 6 months											
	Never			1 day			2 to 5 days			> 5 days		
	%	RR (95% CI)	p	%	RR (95% CI)	p	%	RR (95% CI)	p	%	RR (95% CI)	p
TTH	75.7	reference		18.1	reference		6.1	reference		0.7	reference	
Migraine	69.3	0.9 (0.8-0.9)	<0.0001	25.5	1.4 (1.2-1.6)	<0.0001	10.3	1.7 (1.3-2.1)	<0.0001	1.5	2.0 (1.1-3.9)	0.04
LFEH/IFEH	74.2	reference		19.7	reference		7.6	reference		0.9	reference	
HFEH/CDH	61.6	0.8 (0.7-0.9)	0.0006	34.0	1.7 (1.4-2.2)	<0.0001	14.5	1.9 (1.3-2.8)	0.002	5.0	5.6 (2.7-11.7)	<0.0001

TTH: tension-type headache; LFEH (low frequency episodic headaches): less than 5 days in the past month; IFEH (intermediate frequency episodic headaches): from 5 to 9 days of headache in the past month; HFEH (high frequency episodic headaches): from 10 to 14 days of headache in the past month; CDH (chronic daily headaches): 15 or more days of headache in the past month.

School achievement and absenteeism in school-aged children with primary headache - a Nationwide Study

Marco A. Arruda¹, Renato Arruda², Marcelo E. Bigal^{3,4}

¹ Director, Glia Institute, Ribeirao Preto, SP, Brazil; ² Graduate student, University of Campinas Medical School; ³ Global Director for Scientific Affairs - Neuroscience, Merck Research Laboratories, Whitehouse Station, NJ, U.S.; ⁴ Department of Neurology, Albert Einstein College of Medicine, Bronx, NY, U.S.

2.5% of Brazilian children and adolescents have 10 or more days of headache per month (Poster CE20) (=1,65 millions of children)

35.8% of them are dismissed from school due to headache at least one day per 6 months (590,000 days)

53.5% miss school days due to headache at least one day per 6 months (880,000 days)

= a minimum of 2,9 millions of school days are missed per year in Brazil due to headache





1. Por que a criança foi trazida à consulta? (Hockaday, 1988)

Para diagnóstico e tratamento?

= Atitude ATIVA

Apenas para o diagnóstico?

Há apenas receio de uma causa grave (tumor, MAV...)

Pais se opõem a um tratamento medicamentoso

= Atitude PASSIVA

Apenas para tratamento?

Pais não possuem entendimento de causa

= Atitude PASSIVA

“Parents should also be a target” (Goodman et al., 1997)



2. Qual o impacto da cefaleia sobre a vida da criança?

Atividades escolares, extracurriculares, de lazer,
convívio familiar e social

Instrumentos específicos

Ped MIDAS

Hershey et al., Neurology 2001, 57(11): 2034-9
Hershey et al., Cephalalgia 2004, Oct; 24(10):844-9.

MIDAS Junior Questionnaire

Grazzi, Neurol Sci 2004, Oct; 25 Suppl 3: S261-2.

Decidir sobre a necessidade de tratamento profilático
medicamentoso



MIGRÂNEA CRÔNICA

JAS, fem., 7

Setembro / 1998																											
Dia	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26								
Madrugada																											
Manhã		1		1				1				2	3						3	3							
Tarde	1	1	3	2		1	1	3			1	2	1	1				2	2								
Noite	2	1	2	2			1	1	2		2	1	1	1	2												
Unilateral			X					X					X						X								
Bilateral	X	X		X		X	X		X		X	X		X	X			X	X								
Pressão / aperto		X		X		X	X				X			X					X								
Latejante / pulsátil	X		X					X	X			X	X		X				X								
Piora com esforço	X		X	X				X			X	X		X					X	X							
Náusea			X					X				X	X						X	X							
Vômito																			X	X							
Dor abdominal	X										X																X
Fotofobia			X									X	X														X
Fonofobia			X					X				X															X
Aura																											
Medicação	T	T	T	T				T	T		T		T						T	T							
Resultado (+/-)	+			+				+			+		+						+	+							
Fator desencadeante	X										X																X



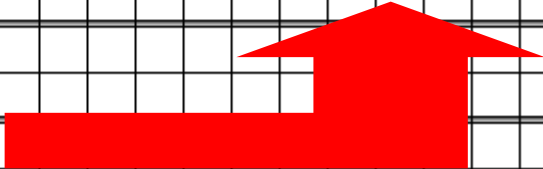
MIGRÂNEA SEM AURA

Baixa frequência e com fator desencadeante identificado

MAC, masc., 5

Julho / 2000		4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Dia																		
Madrugada			2	2														
Manhã			3	3	2													
Tarde		2	2	2	1													
Noite		3	1	1														
Unilateral		X	X	X	X													
Bilateral			X															
Pressão / aperto																		
Latejante / pulsátil		X	X	X	X													
Piora com esforço		X	X	X	X													
Náusea		X	X	X														
Vômito		X	X	X														
Dor abdominal			X	X														
Fotofobia		X	X	X														
Fonofobia		X	X	X														
Aura																		
Medicação		B	B	I														
Resultado (+/-)		-	-	+														
Fator desencadeante		X																

Chocolate





3. Estabeleça uma rotina de hábitos

“Prescribe a sound rhythm in life”

Bo Bille, 1977

Horário para estudar, brincar, tomar as refeições e dormir

“Sleep hygiene lead to a significant reduction of the mean duration and frequency of migraine attacks in children”

Bruni & Guidetti, 1999

4. Oriente sobre fatores desencadeantes

ansiedade, provas escolares, tensão familiar, traumas cranianos, jejum, privação ou excesso de sono, alimentos, barulho excessivo, exposição prolongada ao sol, televisão e games...

Tabaco & Álcool

USA (Cohen et al., 1993): abuso 19%

Brasil (1o. LDUDP, 2001): uso na vida 48,3% e dependência 5,2%

12-17 anos de idade, 107 cidades brasileiras



5. Oriente e incentive o uso do diário de cefaleia

RAS, masc., 9

Junho / 1999																																
Dia	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	S							
Madrugada						2																					2					
Manhã						3						1	1	1													4					
Tarde	2										2		1	1											2	8						
Noite	3												1	1												3						
Unilateral	X					X																			X							
Bilateral						X					X	X	X	X																		
Pressão / aperto											X	X	X	X																		
Latejante / pulsátil	X					X					X	X													X							
Piora com esforço	X					X					X	X													X							
Náusea	X					X					X														X							
Vômito	X																															
Dor abdominal				X		X					X	X		X			X					X										
Fotofobia	X					X					X	X													X							
Fonofobia	X					X					X			X											X							
Aura																									X							
Medicação	B					B					F																					
Resultado (+/-)	+					-					+																					
Fator desencadeante	X					X																										
Dores nas pernas	X											X					X	X				X										

1.1

1.1

1.1

2.1

1.2



6. Evitar fatores envolvidos na cronificação

Estressores psicossociais

Abuso de ANALGÉSICOS (2 doses/sem)

CAFEÍNA (200 mg/dia)

Hering-Hanit & Gadoth 2003 Cephalalgia; 23:332-5.

n= 36, migrânea crônica + abuso de cafeína

≥ 1,5 l cola drinks/dia = 192 mg cafeína/dia

7. Tratar comorbidade psiquiátrica

T. Ansiedade

T. Depressivo

TDAH



8. Tratamento Medicamentoso

Ibuprofeno e Paracetamol
(7.5-10 mg/kg) (15 mg/kg)

Eficazes e devem ser considerados em crianças e adolescentes

Sumatriptano spray nasal
(5 e 20 mg)

Eficaz e deve ser considerado em adolescentes

Outros AINH e triptanos

Dados insuficientes para serem recomendados em crianças e adolescentes

Ueberall, 1999; Winner, 2000, 2002, 2006; Ahonen, 2004; Hamalainen, 1997; Mac Donald, 1994; Linder, 1996, 2000; Visser, 2004; Evers, 2006; Charles, 2006; Lewis, 2002



8. Tratamento Medicamentoso

Flunarizina e Topiramato

(5 mg/dia) (2-3 mg/kg/dia)

Provavelmente eficaz e deve ser considerada
em crianças e adolescentes

Propranolol, Nimodipina e Trazodone

Eficácia controversa

Ciproheptadina, Amitriptilina, Divalproato, Topiramato,
Levetiracetam, Gabapentina e Zonisamida

Dados insuficientes para serem recomendados em
crianças e adolescentes

Pizotifeno e Clonidina

Provavelmente ineficazes em crianças e adolescentes

Ludvigsson, 1974; Sillampää, 1977; Sills, 1982; Forsythe, 1984; Gillies, 1986; Olness, 1987; Guidetti, 1987; Sorge, 1988; Battistella, 1990, 1993; Caruso, 2000; Hershey, 2000, 2002; Belman, 2001; Sedaroglu, 2002; Miller, 2004; Lewis, 2004; Winner, 2005; Pakalnis, 2006

Tratamento profilático

Existe uma necessidade urgente
de estudos cegos, randomizados e
controlados por placebo

FALTA
de EVIDÊNCIA
de EFICÁCIA

≠

EVIDÊNCIA
de FALTA
de EFICÁCIA



9. Tratamento não-medicamentoso

Terapia Comportamental

Terapia Cognitiva

Treinamento de Relaxamento

Holden et al., 1999

Biofeedback

Hermann et al., 1995

Melhor resposta que em adultos (Andrasik, 1999)

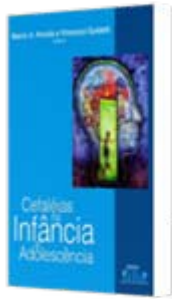
Maior entusiasmo, rápido aprendizado, menor ceticismo sobre auto-regulação, maior confiança em habilidades especiais, maior susceptibilidade psicofisiológica, menor cronicidade do problema, menor chance de insucesso terapêutico prévio e propensão a melhor interagir com o método



**Prophylactic treatment of migraine in children.
Part 1. A systematic review of non-pharmacological trials.**

Damen L, Bruijn J, Koes BW *et al.*
Cephalalgia. 2005; 26:373–83

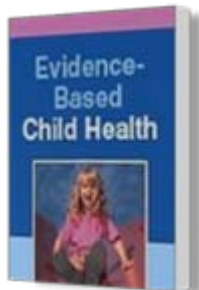
Tratamento profilático



9. Tratamento não-medicamentoso

Reviewers' conclusions

There is very good evidence that psychological treatments, principally relaxation and cognitive behavioural therapy, are effective in reducing the severity and frequency of chronic headache in children and adolescents.



Psychological therapies for the management of chronic and recurrent pain in children and adolescents

Cochrane Review

Eccleston et al., 2004

Tratamento profilático