WCN2013 Teaching Course 2
Management of headache-An update

Organization of headache service

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Disclosure

none

Learning Objectives: At the end of the lecture, the participants will be able to

- Describe the need for appropriate headache service
- Identify evidence that supports organization and outcome of multidisciplinary, integrated and coordinated headache service
- Take an interest in headache medicine and specialized headache service

Headache

- One of the most common diseases of the nervous system
- Primary headache, such as migraine, causes substantial levels of disability

Yet, throughout the world headache has been and continues to be

- Underestimated
- Under-recognized
- Under-treated

Problems to be solved

Lack of awareness of migraine as disease

Low doctor attendance rate

Proper medication and education not well distributed

Lack of attention by the health-policy makers

Many patients suffering in “Silence” (in Japan)

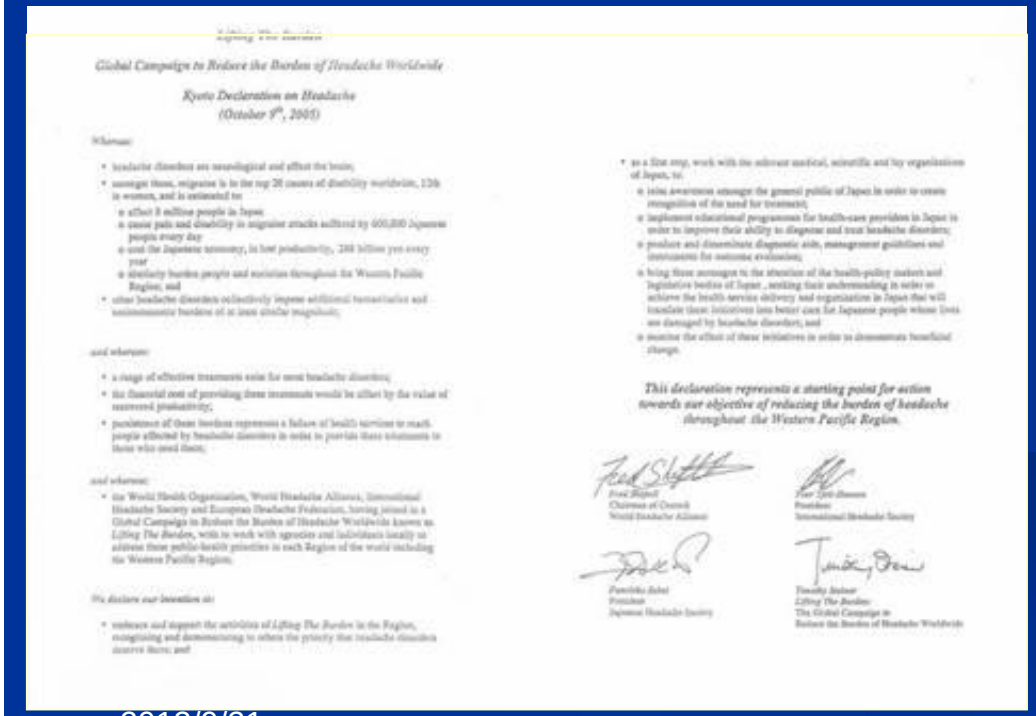
IHC2005, Kyoto

2013/9/21

Kyoto Declaration on Headache (2005)

(12th International Headache Congress)

The Global Campaign to Reduce the Burden of Headache in the Western Pacific Region



Global Campaign to Reduce the Burden of Headache Worldwide

Kyoto Declaration on Headache
(October 9th, 2005)

This declaration represents a starting point for action towards our objective of reducing the burden of headache throughout the Western Pacific Region.

Signed by

Fred Sheftell　Peer Tfelt-Hansen

WHA　IHS

Fumihiko Sakai　Timothy Steiner

JHS　Lifting the Burden Global Campaign

*á Attended by WHO and Japanese Ministry

“Organization of headache service” drafted by IHS Task Force, 2010

Recommended a stratified (3-tier) system.

The organization with Level 1 (Primary care), Level 2 (Headache outpatient service), Level 3 (Specialized headache center) are suggested as recommended standard.

The specialized headache center should provide best clinical care, teaching and research.

National modification is to be applied.

Proposed Organization of Headache Service

3-tier system

(EHF, 2009)

Level 3: Specialised headache centres

Specialised Headache Center
- both inpatient and outpatient treatment
- Education
- Research
- Organisation of networks with levels 1 and 2

Level 2: Headache out-patient service

Secondary care or primary care with special interest in headache disorders
- Completion of special training
- fulfills national requirements for special headache/pain therapy if available

Level 1: Headache Primary Care

Primary care without special interest in headache disorders
-Following treatment guidelines
-Selecting patients for higher levels (gate-keeper function)
-Provide continuing long-term care after discharge from levels 2 and 3

Three missions of Specialized Headache Center

Clinical care

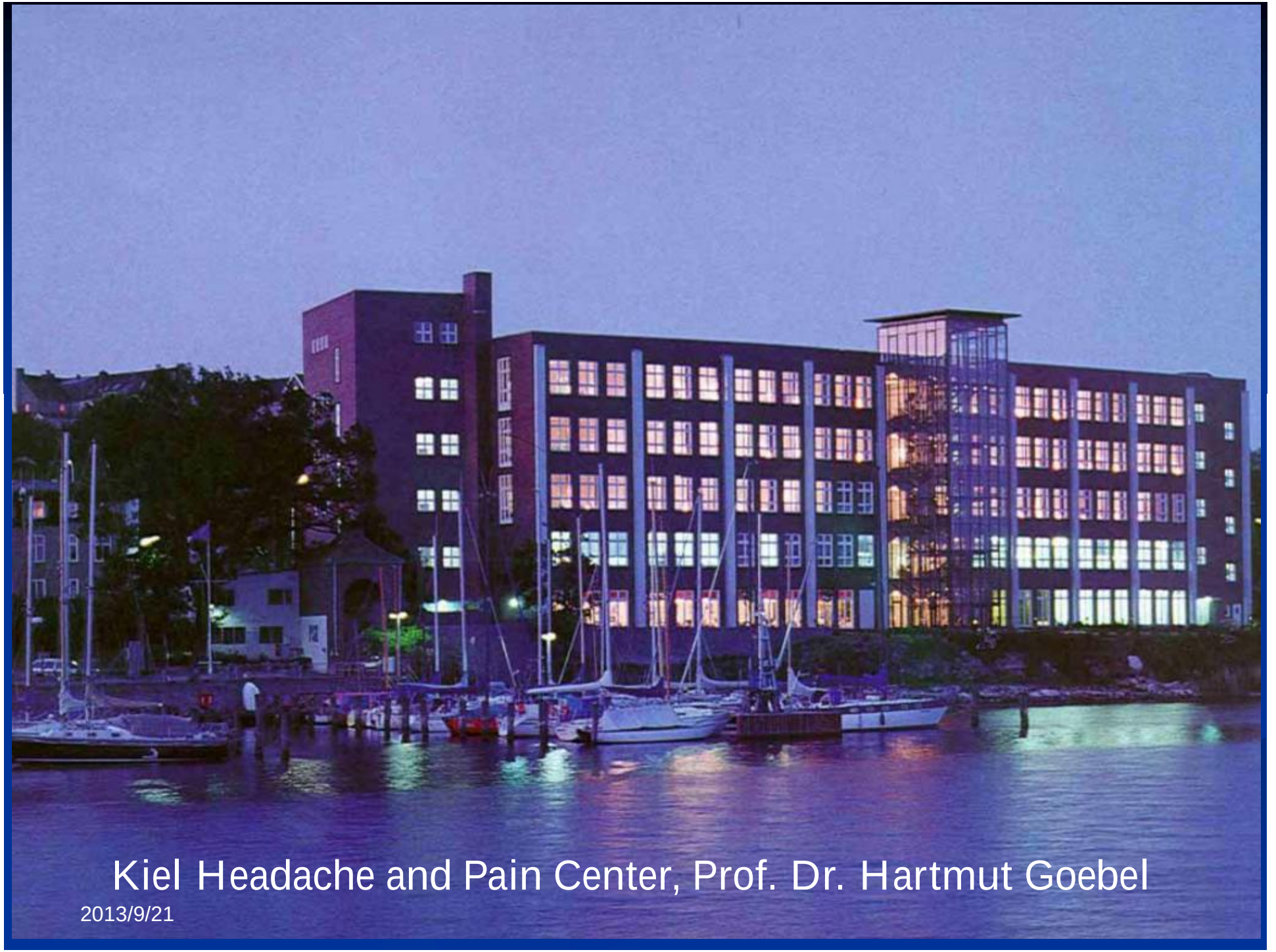
- Multidisciplinary, integrated, coordinated management and long term follow up with outcome evaluation
- Supra-regional centre for complex headaches

Teaching

- Teaching of the medical society and lay people
- Provide facilities and material for education of headache

Research

- Therapeutic trials (abortive and preventive)
- Pathophysiological and clinical research



Kiel Headache and Pain Center, Prof. Dr. Hartmut Goebel

2013/9/21

Original Article

Cephalalgia
International Headache Society

Cephalalgia
30(10) 1214–1224

DOI: 10.1177/0333102410361403
cep.sagepub.com
SAGE

Predictors of outcome of the treatment programme in a multidisciplinary headache centre

Rigmor Jensen[1], Peter Zeeberg[1], Christian Dehlendorff[2] and Jes Olesen[1]

Abstract

Introduction: Despite the high prevalence of headaches, multidisciplinary headache clinics are few and their efficacy still needs validation. The objective was to characterise patients and treatment results in a tertiary headache centre.

Subjects and methods: A systematic review of all referred patients in the Danish Headache Centre in a 2-year period. Outcome results were analysed with respect to diagnoses and sociodemographics.

Results: A total of 1326 patients with a mean age of 43.7 years and male : female ratio of 3 : 7 were included. In total, frequency and absence rate from work were reduced from 20 to 11 days ($P < 0.001$) and 5 to 2 days/month ($P < 0.001$), respectively. Predictors for good outcome were female gender, migraine, triptan overuse and a frequency of 10 days/month, whereas tension-type headache and overuse of simple analgesics predicted a poor outcome.

Conclusions: The present analysis provided support for a multidisciplinary approach in a tertiary headache centre. Further evaluation of specific treatment strategies and outcome predictors are important for future planning.

Keywords

multidisciplinary, treatment outcome, headache centre, refractory headaches, predictors

Date received: 14 August 2009; accepted: 30 December 2009

A positive outcome, despite referrals of refractory headaches

Table 3. Characteristics of headache and their treatment outcome in relation to diagnosis

	Duration of headache (years)	Headache frequency (days/month)		Headache intensity# (0–3 scale)		Attack duration# (h)		Absence rate# (days/month)	
		Initial	After	Initial	After	Initial	After	Initial	After
Migraine* ($n=379$)	18.7 (0–61)	7.5	2.9***	2.5	0.4***	17.4	2.8***	3.1	1.2***
TTH* ($n=451$)	14.2 (0–76)	19.2	12***	1.8	0.9***	12.3	2.5***	2.5	1.6**
MOH or probable MOH ($n=337$)	#	27.6	14***	2.1	0.7***	12.9	–	#	
Cluster headache§ ($n=49$)	11.8 (0.2–41)	23.3	4.9***	2.8	–	2.3	–	11.2	2***
Others ($n=200$)	4.9 (0–64)	25.4	15.1***	2.2	0.9***	4.9	4.4 ns	7.2	2.1***
Total ($n=1326$)	10.6 (0–76)	20	11***	#		#		5	2***

Mean values are indicated with range in brackets and level of significance with asterix (*$P<0.05$, **$P<0.01$ and ***$P<0.001$).
#Indicates missing values; *indicate migraine or TTH without MOH and §indicates that 31/49 cluster headache patients were headache free after treatment.

Headache
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Published by Wiley Periodicals, Inc.

Research Submission

Outcomes of a Headache-Specific Cross-Sectional Multidisciplinary Treatment Program

Thomas-Martin Wallasch, MD; Andreas Angeli; Peter Kropp, PhD

Aim.—Chronic headache is a disabling disorder that is frequently poorly managed in general clinical practice.

Objectives.—To investigate primary (headache frequency in days/month) and secondary (headache-related disability, lost work/school time, anxiety and depression, amount and intake frequency of acute medication) 12-month outcomes of a headache-specific cross-sectional outpatient and inpatient multidisciplinary treatment program using a dedicated computer system for data collection and corresponding between integrated care team in a tertiary headache center and practicing headache specialists.

Background.—A need for integrated headache care using comprehensive and standardized assessment for diagnosis of headache, psychiatric comorbidity, and burden of disease exists. There are little published data on long-term efficacy of multidisciplinary treatment programs for chronic headache.

Design.—A prospective, observational, 12-month, follow-up study.

Subjects and Methods.—Prospectively recruited consecutive patients with frequent difficult-to-treat headaches (n = 201; 63 migraine, 11 tension-type headache, 59 combined migraine/tension-type headache, and 68 medication overuse headache) were enrolled. Outcome measures included prospective headache diaries, a medication survey, Migraine Disability Assessment, 12-item short form health survey, and the Hospital Anxiety and Depression Scale.

Results.—The primary outcome of a reduction of ≥50% of headache frequency (days/month) was observed in 62.7%. Mean headache frequency decreased from 14.4 ± 8.2 to 7.6 ± 8.3 days/month, $P < .0001$. Secondary outcomes improved significantly in the total cohort and all headache subgroups. Predictors for good outcome were younger age, few days lost at work/school, and familiarity with progressive muscle relaxation therapy at baseline.

Conclusions.—The present analysis provided support for a cross-sectional multidisciplinary integrated headache-care program.

Key words: integrated care, multidisciplinary, outcome study, chronic headache, behavioral

(*Headache* 2012;52:1094-1105)

Strategies for better headache service by the Japanese Headache Society, 2005

More physicians interested in headache

Clinical Guidelines and clinical tools for physicians and patients

Headache specialists, Board certified

Better medical-care system for chronic headaches

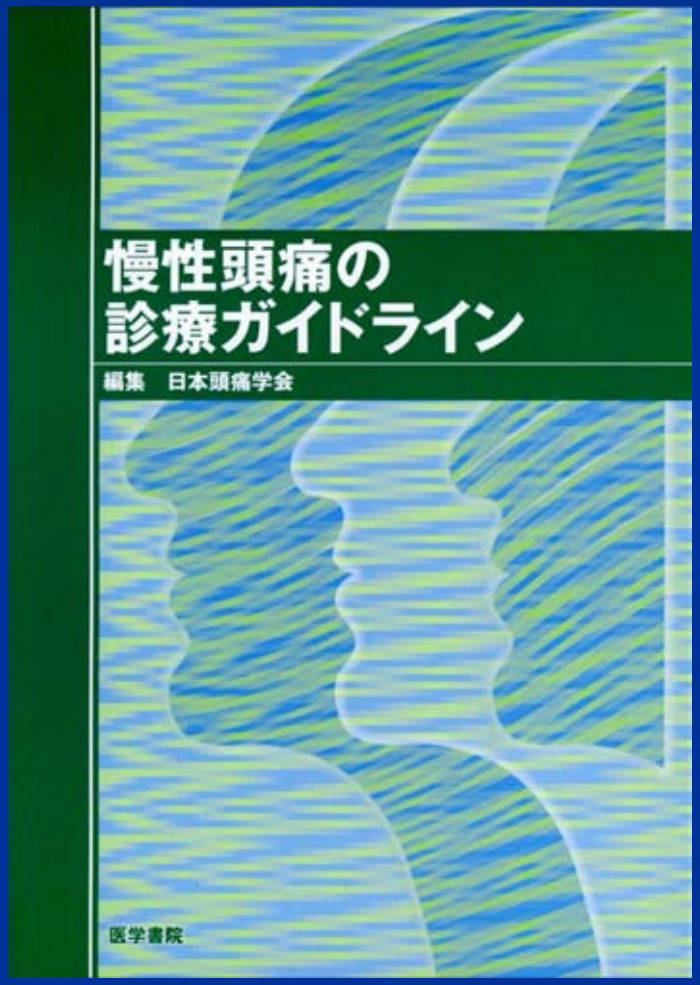
Specialized headache centers and clinics

Guidelines for Headache Practice

?áfor physicians, 2006 ?[

?áfor physicians,2013?[

Guidelines for Headache Practice



?áfor physicians ?

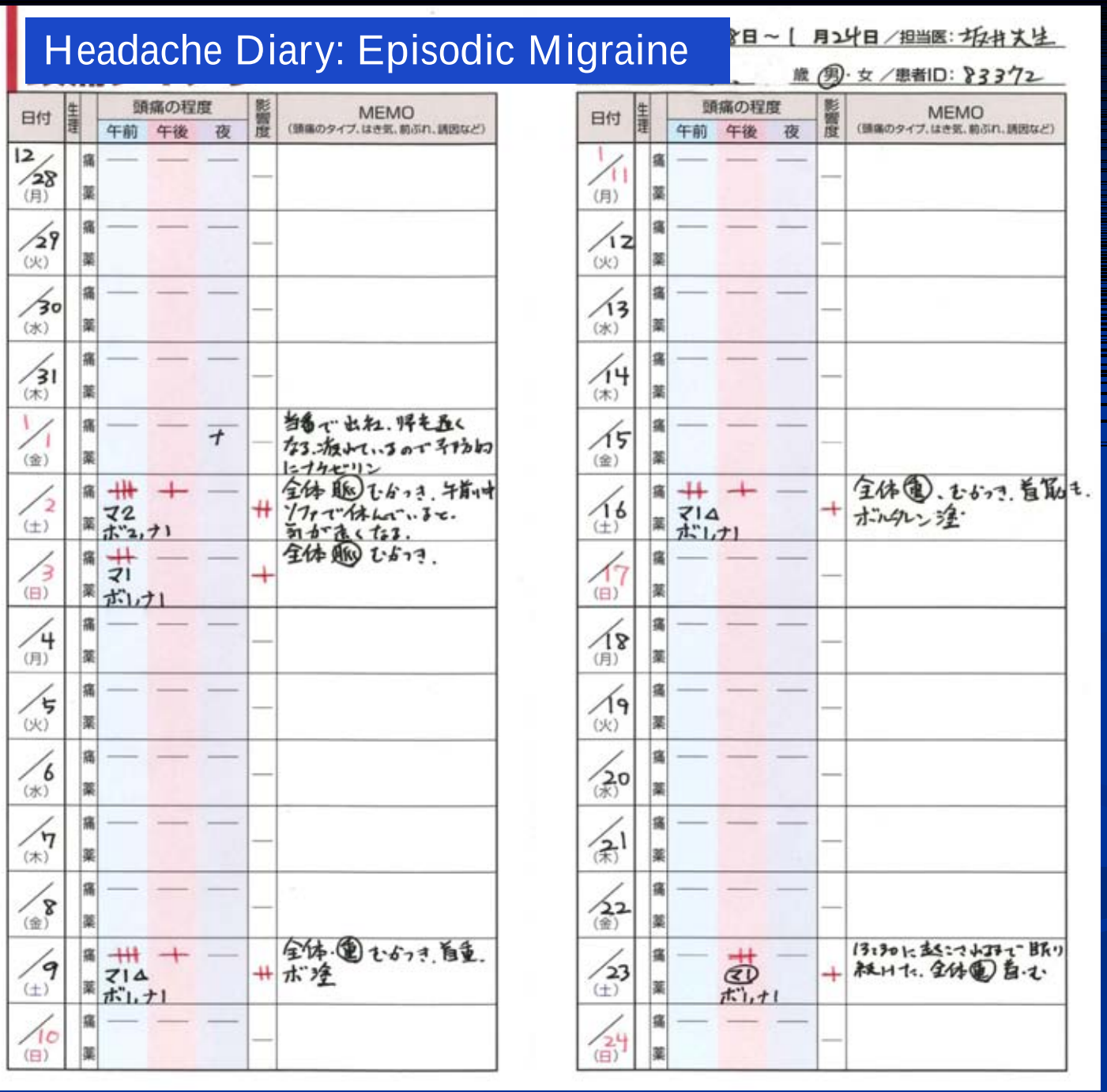
? for lay ?

Headache Diary
was designed as

Clinical tool for headache diagnosis

Scientific tool to obtain patients' information, to explore sources of clinical questions about the mechanism

Headache Diary: Episodic Migraine



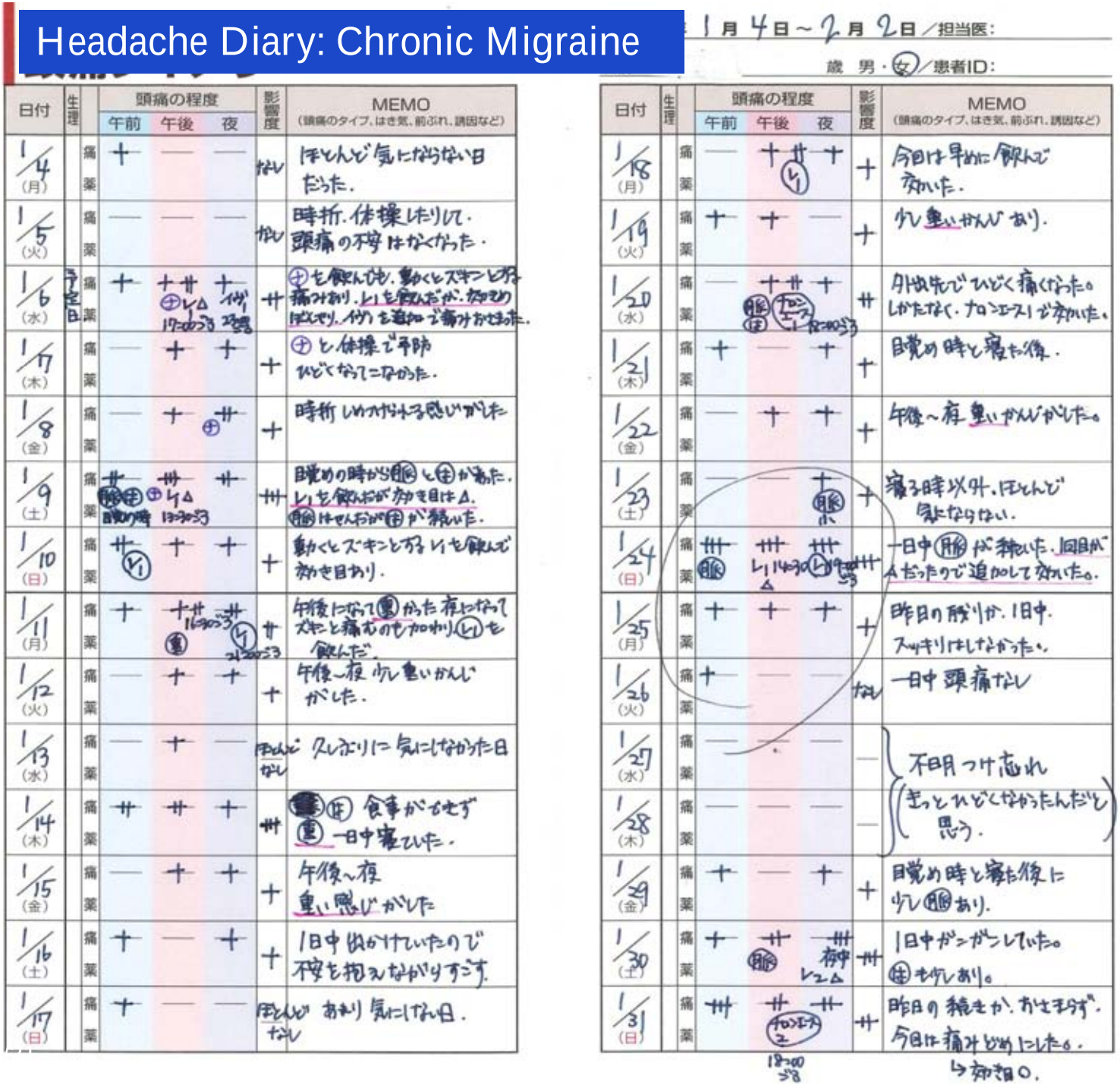
日～[月24日 /担当医: 坂井大生

歳 (男)・女 /患者ID: 83372

日付	生理		頭痛の程度 午前	午後	夜	影響度	MEMO (頭痛のタイプ、はき気、前ぶれ、誘因など)
12/28 (月)		痛	—	—	—	—	
		薬					
/29 (火)		痛	—	—	—	—	
		薬					
/30 (水)		痛	—	—	—	—	
		薬					
/31 (木)		痛	—	—	—	—	
		薬					
1/1 (金)		痛	—	—	ナ	—	当番で出社。帰宅遅くなる。疲れているので予防的にナゼセリン
		薬					
/2 (土)		痛	++	+	—	++	全体 頭 むかつき。午前中ソファで休んでいるて。到が重くなる。
		薬	マ2 ボ1ナ1				
/3 (日)		痛	++	—	—	+	全体 頭 むかつき。
		薬	マ1 ボ1ナ1				
/4 (月)		痛	—	—	—	—	
		薬					
/5 (火)		痛	—	—	—	—	
		薬					
/6 (水)		痛	—	—	—	—	
		薬					
/7 (木)		痛	—	—	—	—	
		薬					
/8 (金)		痛	—	—	—	—	
		薬					
/9 (土)		痛	+++	+	—	++	全体・重 むかつき。首重。ボ1錠
		薬	マ1ム ボ1ナ1				
/10 (日)		痛	—	—	—	—	
		薬					

日付	生理		頭痛の程度 午前	午後	夜	影響度	MEMO (頭痛のタイプ、はき気、前ぶれ、誘因など)
1/11 (月)		痛	—	—	—	—	
		薬					
/12 (火)		痛	—	—	—	—	
		薬					
/13 (水)		痛	—	—	—	—	
		薬					
/14 (木)		痛	—	—	—	—	
		薬					
/15 (金)		痛	—	—	—	—	
		薬					
/16 (土)		痛	++	+	—	+	全体 重、むかつき。首筋も。ボルタレン塗。
		薬	マ1ム ボ1ナ1				
/17 (日)		痛	—	—	—	—	
		薬					
/18 (月)		痛	—	—	—	—	
		薬					
/19 (火)		痛	—	—	—	—	
		薬					
/20 (水)		痛	—	—	—	—	
		薬					
/21 (木)		痛	—	—	—	—	
		薬					
/22 (金)		痛	—	—	—	—	
		薬					
/23 (土)		痛	—	++	—	+	ほぼ朝に起こされるまで眠り続けた。全体 重 首・む
		薬		マ1 ボ1ナ1			
/24 (日)		痛	—	—	—	—	
		薬					

Headache Diary: Chronic Migraine



1月4日～2月2日／担当医：

歳　男・女／患者ID：

日付	生理		頭痛の程度 午前	午後	夜	影響度	MEMO（頭痛のタイプ、はき気、前ぶれ、誘因など）
1/4（月）		痛 薬	+	—	—	なし	ほとんど気にならない日だった。
1/5（火）		痛 薬	—	—	—	なし	時折、体操したりして、頭痛の不安はなくなった。
1/6（水）	予定日	痛 薬	+	++ ㊉ レ△	+ イザリ	++	㊉を飲んでも、動くとズキンとする痛みあり。レを飲んだが、かなりぼんやり。イザリを追加で痛みがおさまった。
1/7（木）		痛 薬	—	+	+	+	㊉と体操で予防ひどくならなかった。
1/8（金）		痛 薬	—	+	++ ㊉	+	時折しめつけられる感じがした
1/9（土）		痛 薬	++ 服 ㊉ 目覚め時	++ ㊉ レ△	++	+++	目覚めの時から服と㊉があった。レを飲んだが効き目はΔ。服はせんおが㊉が残った。
1/10（日）		痛 薬	++ レ	+	+	+	動くとズキンとするレを飲んで効き目あり。
1/11（月）		痛 薬	+	++ 重	++ レ	++	午後になって重かった夜になってズキンと痛むのでかわりレを飲んだ。
1/12（火）		痛 薬	—	+	+	+	午後～夜 少し重いかんじがした。
1/13（水）		痛 薬	—	+	—	ほとんど なし	久しぶりに気にならなかった日
1/14（木）		痛 薬	++	++	+	+++	食㊉ 食事がとれず 重 一日中寝ていた。
1/15（金）		痛 薬	—	+	+	+	午後～夜 重い感じがした
1/16（土）		痛 薬	+	—	+	+	1日中出かけていたので不安を抱えながらすごす。
1/17（日）		痛 薬	+	—	—	ほとんど なし	ほとんど あまり気にならない日。

日付	生理		頭痛の程度 午前	午後	夜	影響度	MEMO（頭痛のタイプ、はき気、前ぶれ、誘因など）
1/18（月）		痛 薬	—	+ ++ レ	+	+	今日は早めに飲んで効いた。
1/19（火）		痛 薬	+	+	—	+	少し重いかんじあり。
1/20（水）		痛 薬	—	++ 服 ㊉	+ プロンエース1 18:00ごろ	++	引出先でひどく痛くなった。しかたなく、プロンエース1で効いた。
1/21（木）		痛 薬	+	—	+	+	目覚め時と寝た後。
1/22（金）		痛 薬	—	+	+	+	午後～夜 重いかんじがした。
1/23（土）		痛 薬	—	—	+ 服 ㊉	+	寝る時以外、ほとんど気にならない。
1/24（日）		痛 薬	+++ 服	+++ レ	+++ レ 18:00ごろ	+++	一日中服が残った。2回目がΔだったりで追加して効いた。
1/25（月）		痛 薬	+	+	+	+	昨日の酔いが、1日中スッキリはしなかった。
1/26（火）		痛 薬	+	—	—	なし	一日中 頭痛なし
1/27（水）		痛 薬	—	—	—	—	不明つけ疲れ
1/28（木）		痛 薬	—	—	—	—	きっとひどくなかったんだと思う。
1/29（金）		痛 薬	+	—	+	+	目覚め時と寝た後に少し服あり。
1/30（土）		痛 薬	+	++ 服	+++ 夜中 レ△	+++	1日中ガンガンしていた。㊉も少しあり。
1/31（日）		痛 薬	+++	++ プロンエース2 18:00ごろ	++	++	昨日の疲れが、かなまらず、今日に痛み止めにした。→効き目○。

“Headache specialist” program

Effort to keep the high Qualification level

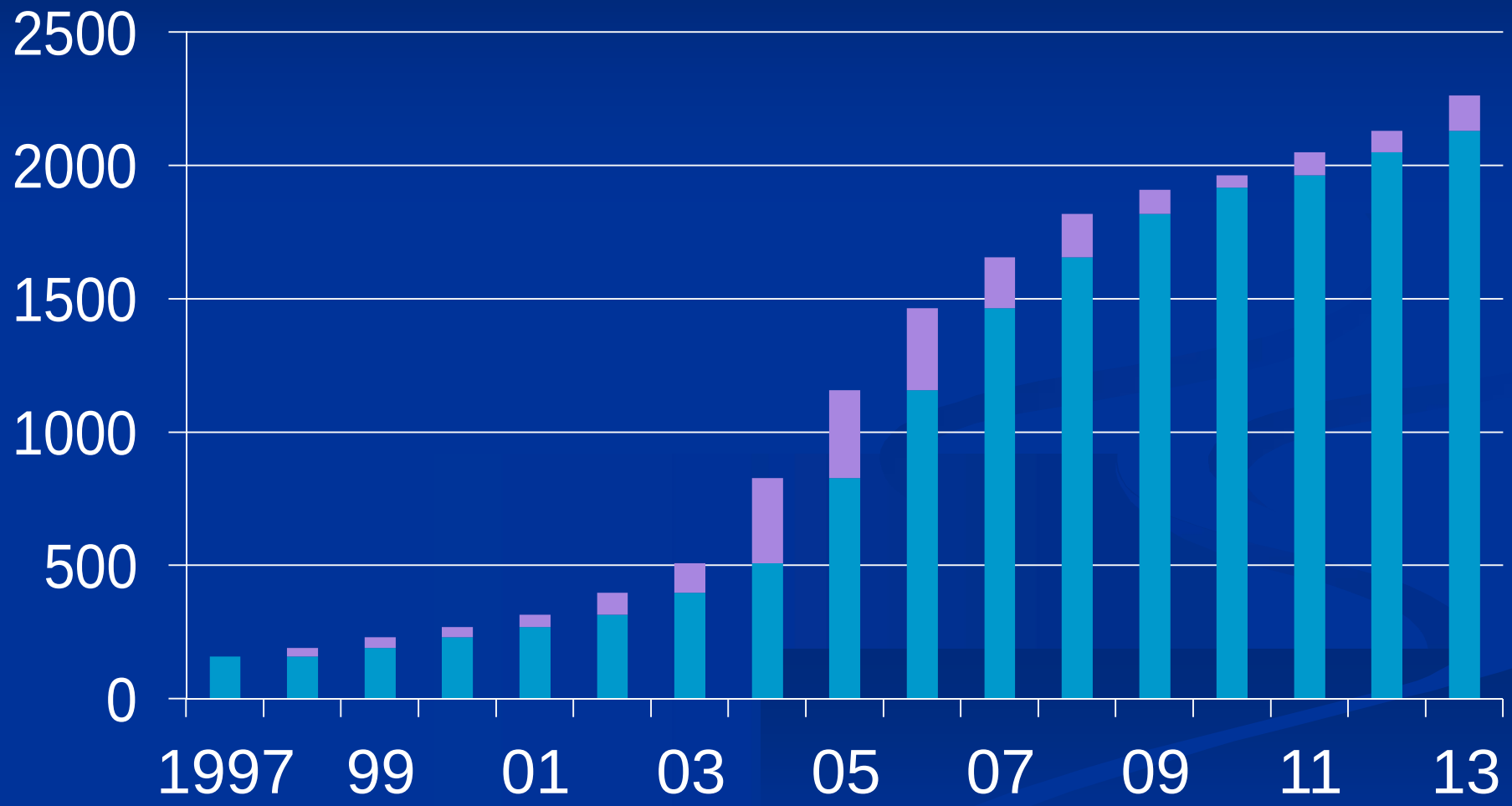
Headache specialist should document specific education and experience through a specific core curriculum

Headache Specialist, “Board certified system”

- Started in 2005, there are 785 headache specialists, certified by JHS board (by Ministry, applying!)

Members of Japanese Headache Society (2013)

(ì2,262 members, 785 specialists)ì



IHC2005
Kyoto

2013/9/21

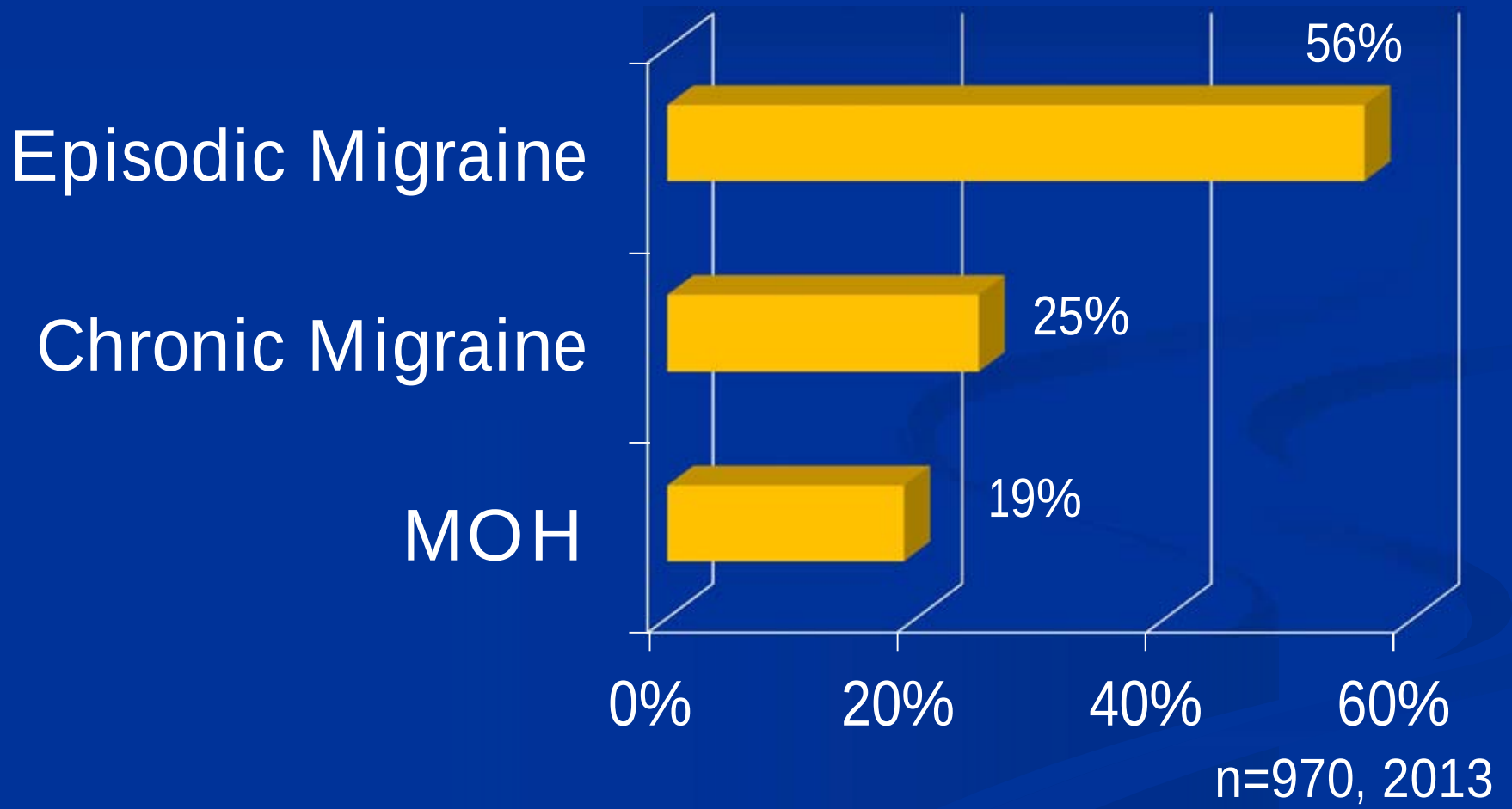
Educating Headache Specialists

2nd International Headache Society's "Headache Master School"

Saitama International Headache Center / Saitama Neuropsychiatric Institute

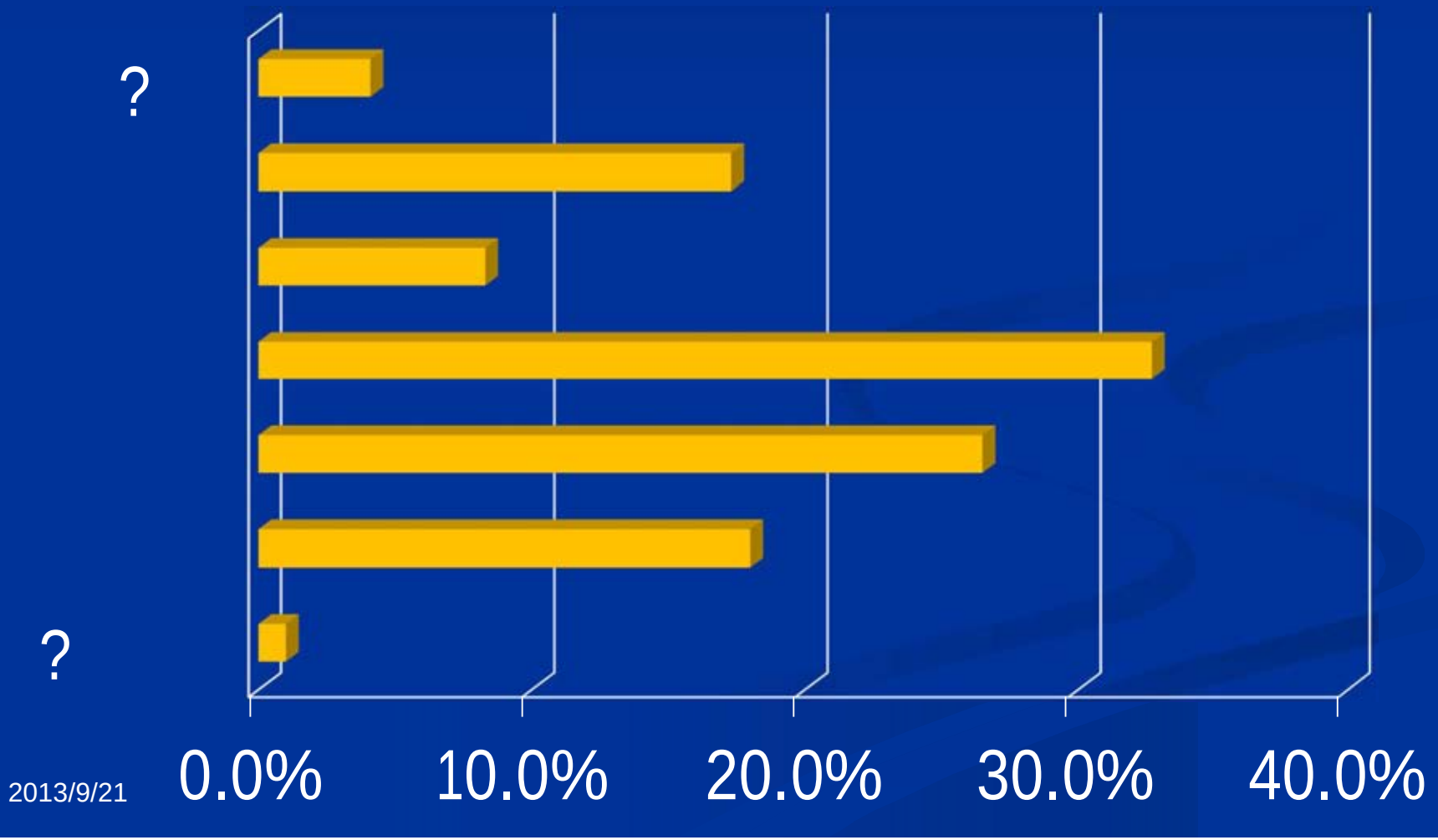
2013/9/21

Chronic Migraine and MOH
- difficult to treat -



MOH : Medication Overuse Headache

Prevalence of migraine at our Center; Age distribution: n=970/year



A team approach is intended at most of the headache centers

Physicians

Pharmacists

Psycho-behavioral therapists

Physiotherapists

And,

Oriental medicine therapists

Oriental Medicine is expected to play an important role

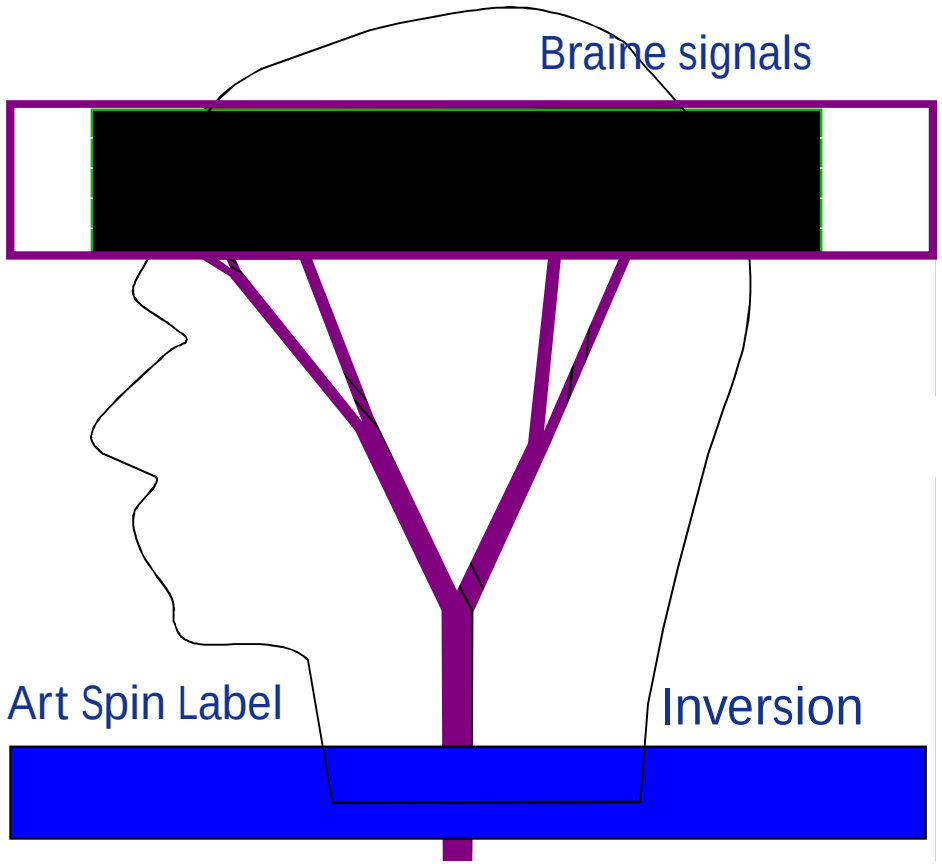
Acupuncture for the prevention of chronic migraine and medication overuse headache

Yoga for children suffering from migraine

Scientific evidence is our work

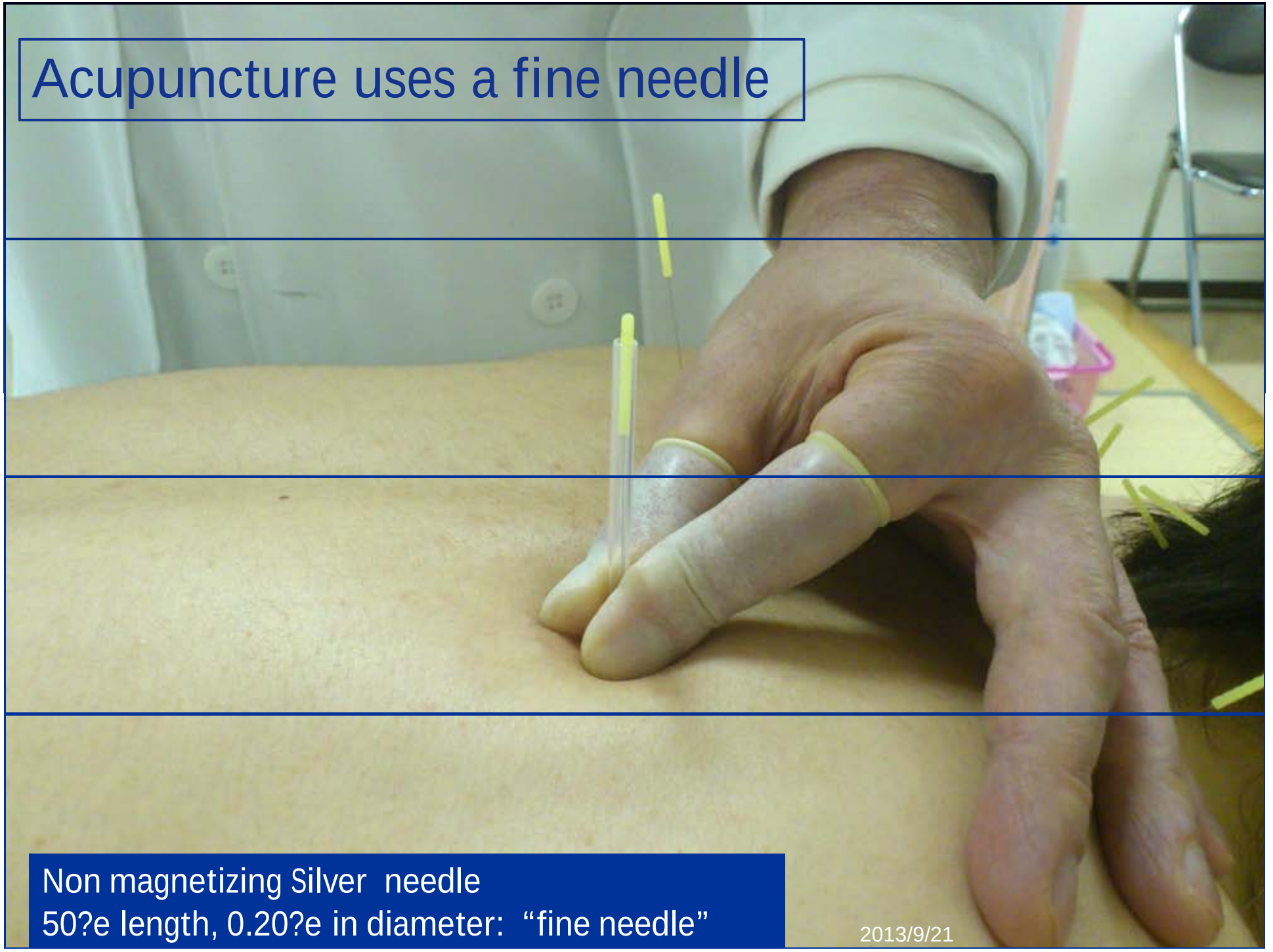
Effect of acupuncture on the brain blood flow measured By non invasive, regional, quantitative, continuous method

Arterial Spin Labeling method



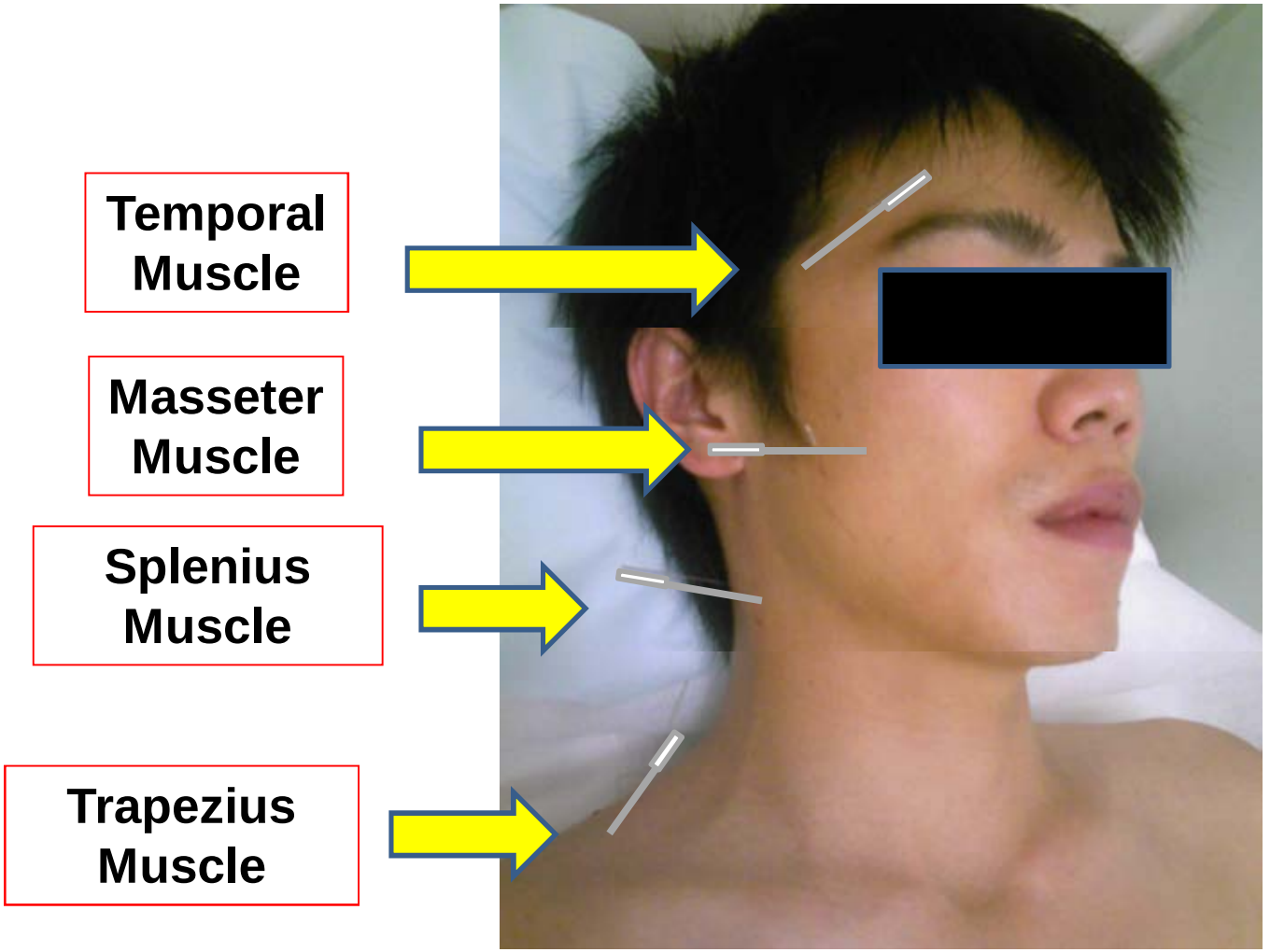
SIEMENS MAGNETOM 3T MRI

Acupuncture uses a fine needle



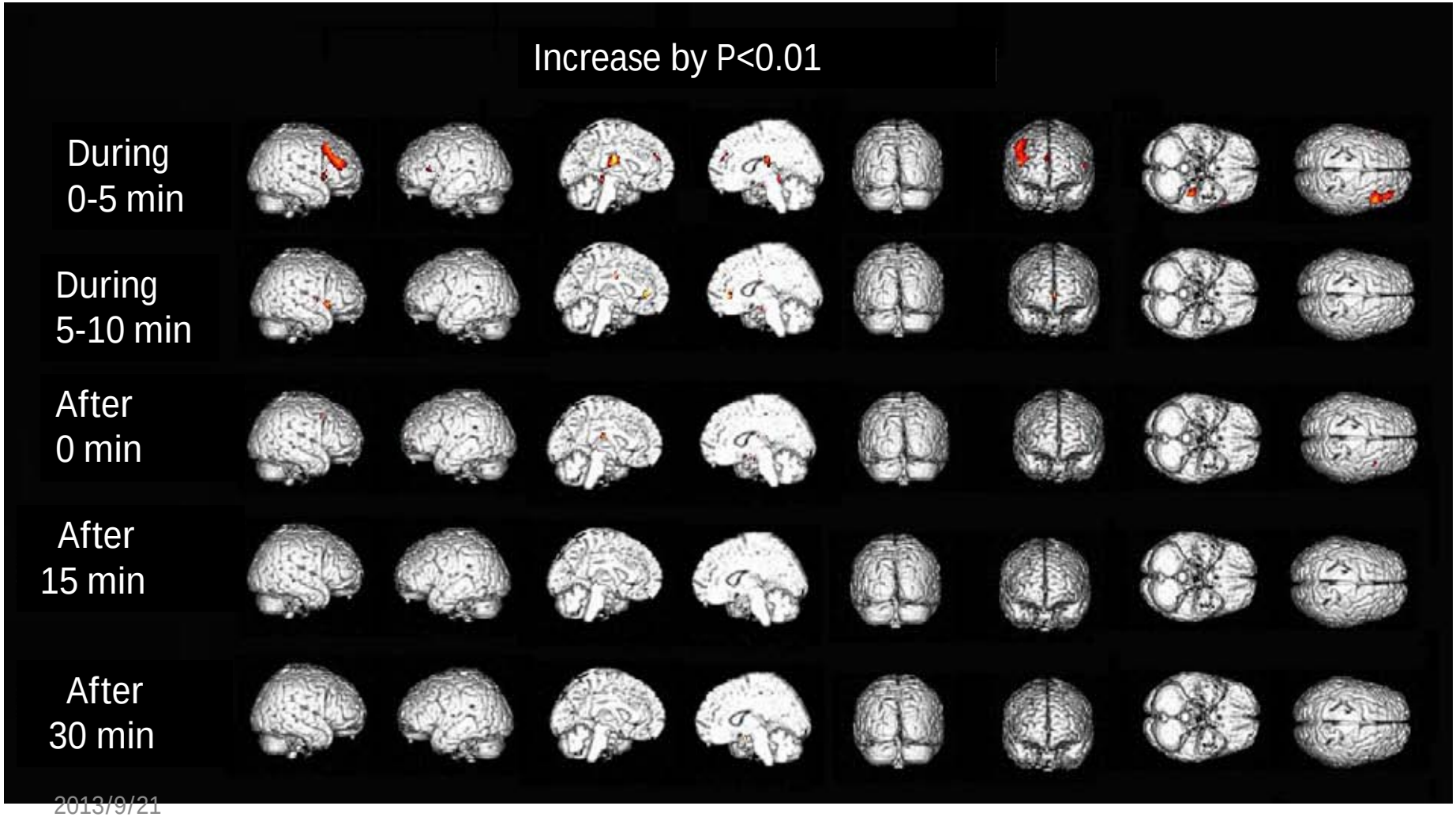
Non magnetizing Silver needle
50?e length, 0.20?e in diameter: “fine needle”

To see the effect of Acupuncture on Migraine



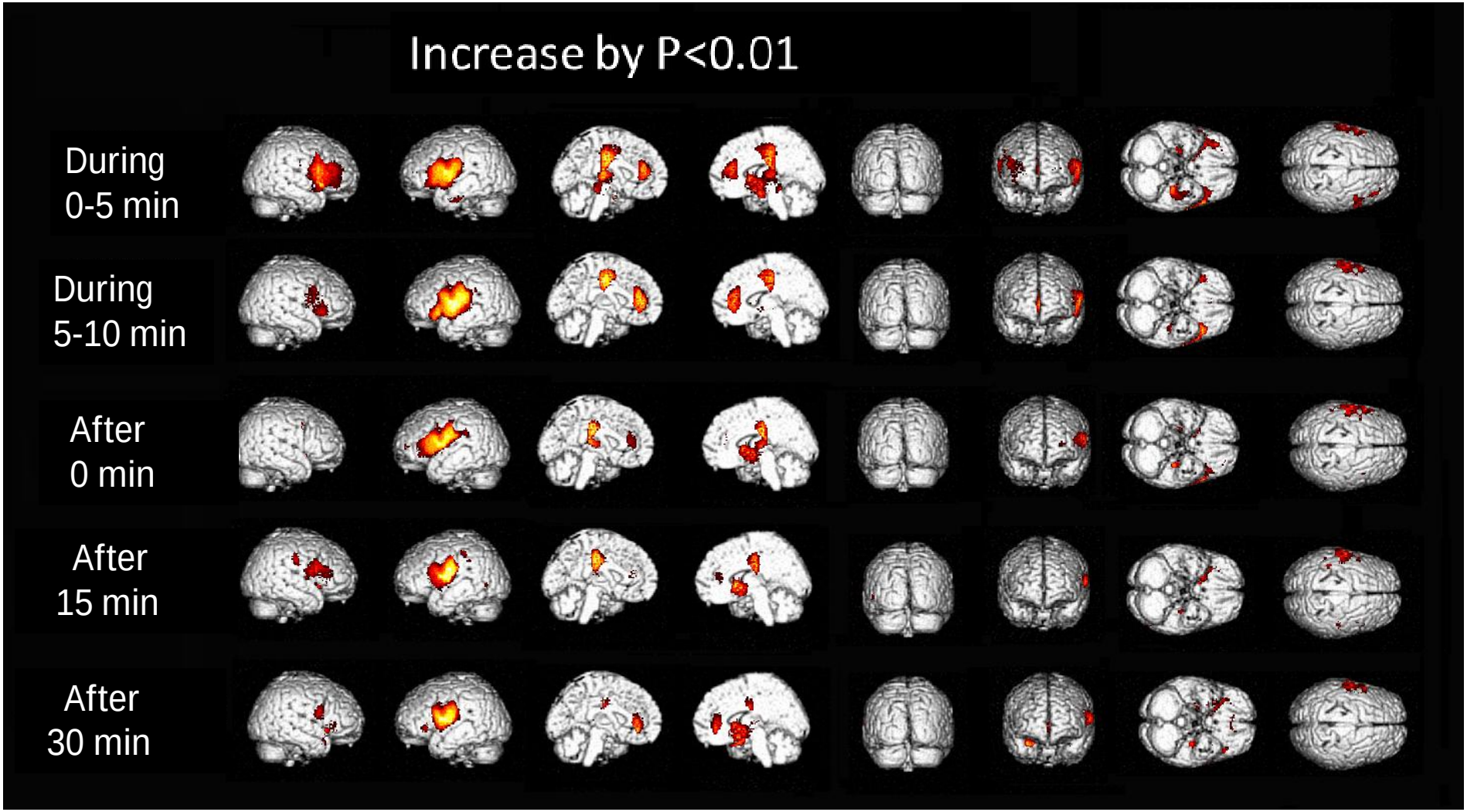
Non magnetizing Silver needle
50?Ž length, 0.20?Ž in diameter: “fine needle”

Changes in Brain Blood Flow during Acupuncture in Normal (n=12)



Operculum, thalamus, cingulate

Greater Changes in Brain Blood Flow during Acupuncture in Migraine (n=10)



operculum, insula, cingulate, thalamus, hypothalamus, parietal – CBF

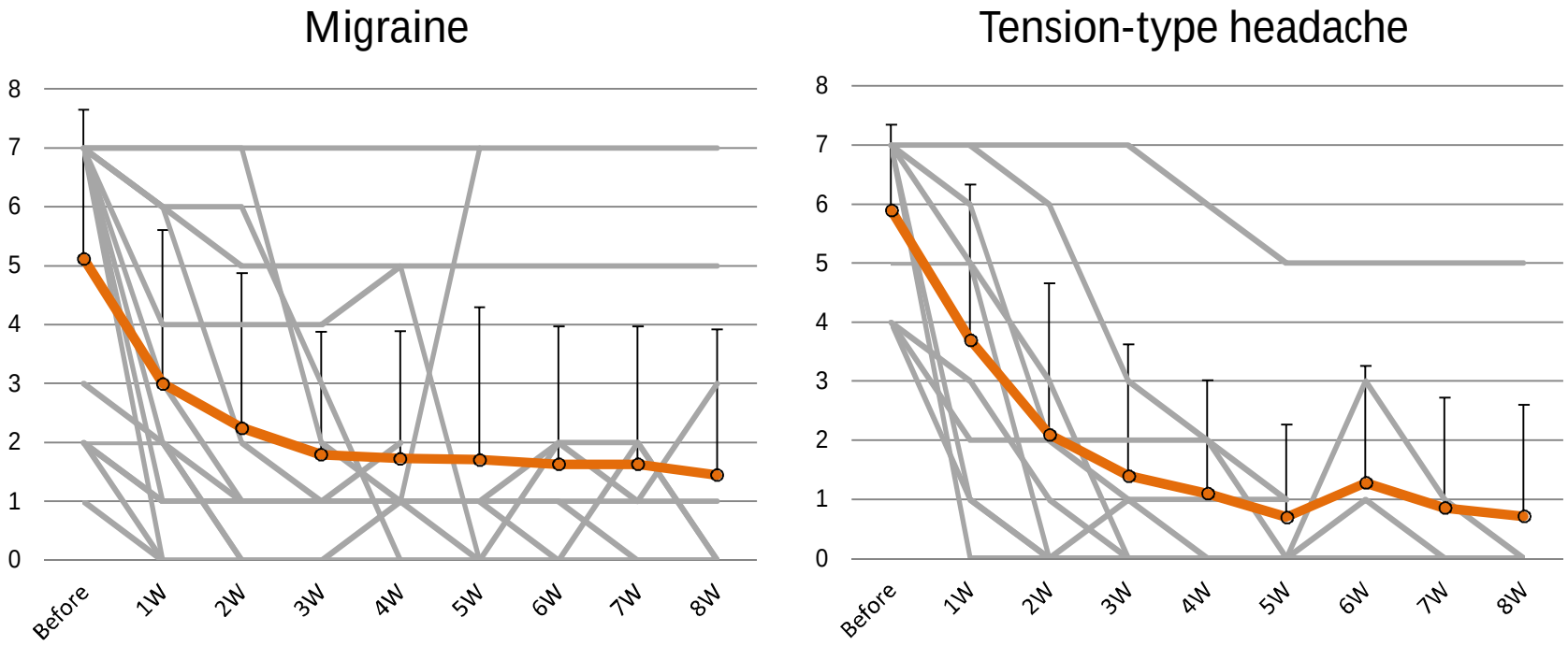
Acupuncture and Brain

Brain response to acupuncture was more sensitive in patients with migraine than normal controls

Acupuncture by sending signals to brain-regions of emotion, pain and ANS may modify hyper reactive migrainous brain

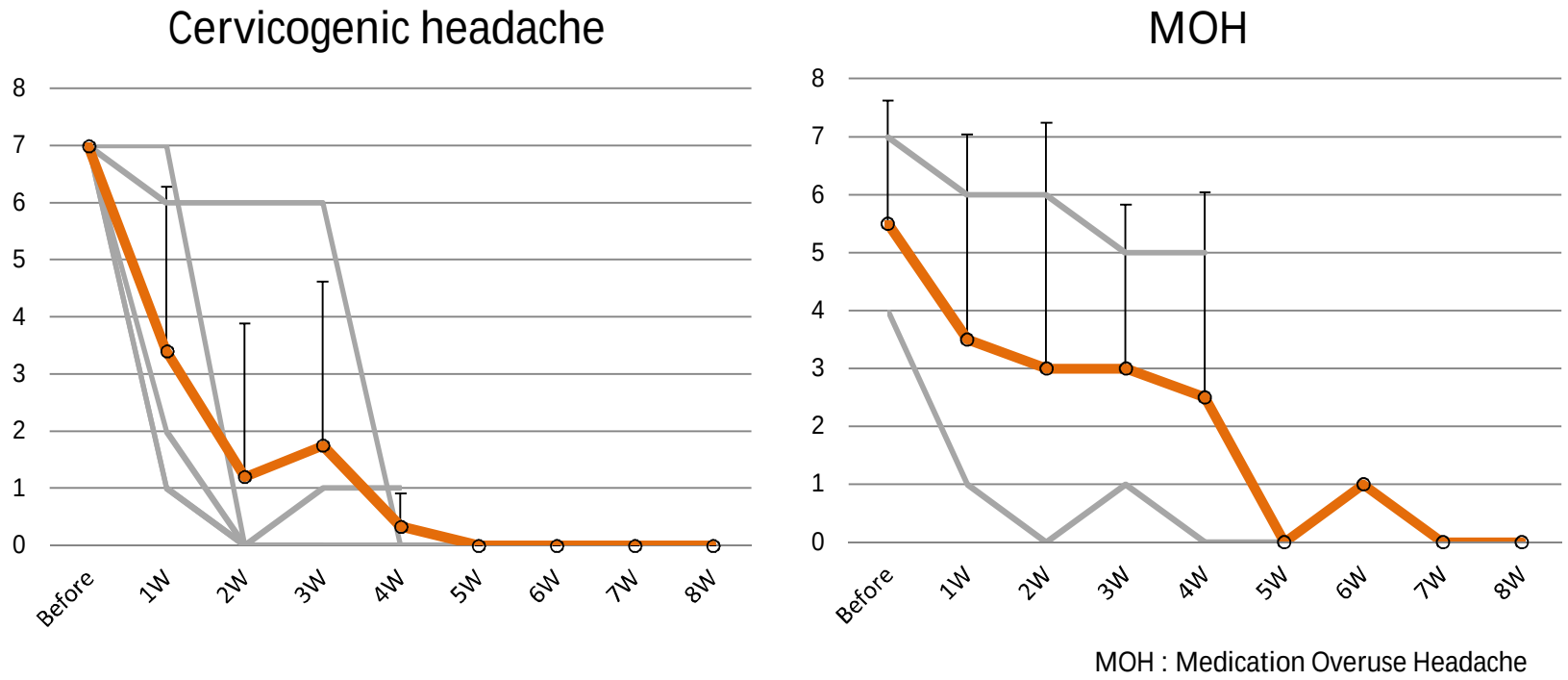
Exact mechanism is to be investigated,

Changes in headache days after acupuncture



Once (30min therapy) a week for 5 weeks

Changes in headache days after acupuncture



MOH : Medication Overuse Headache

Once (30min therapy) a week for 5 weeks

Yoga for migraine

Relaxing mind and body

Children doing Yoga with mother

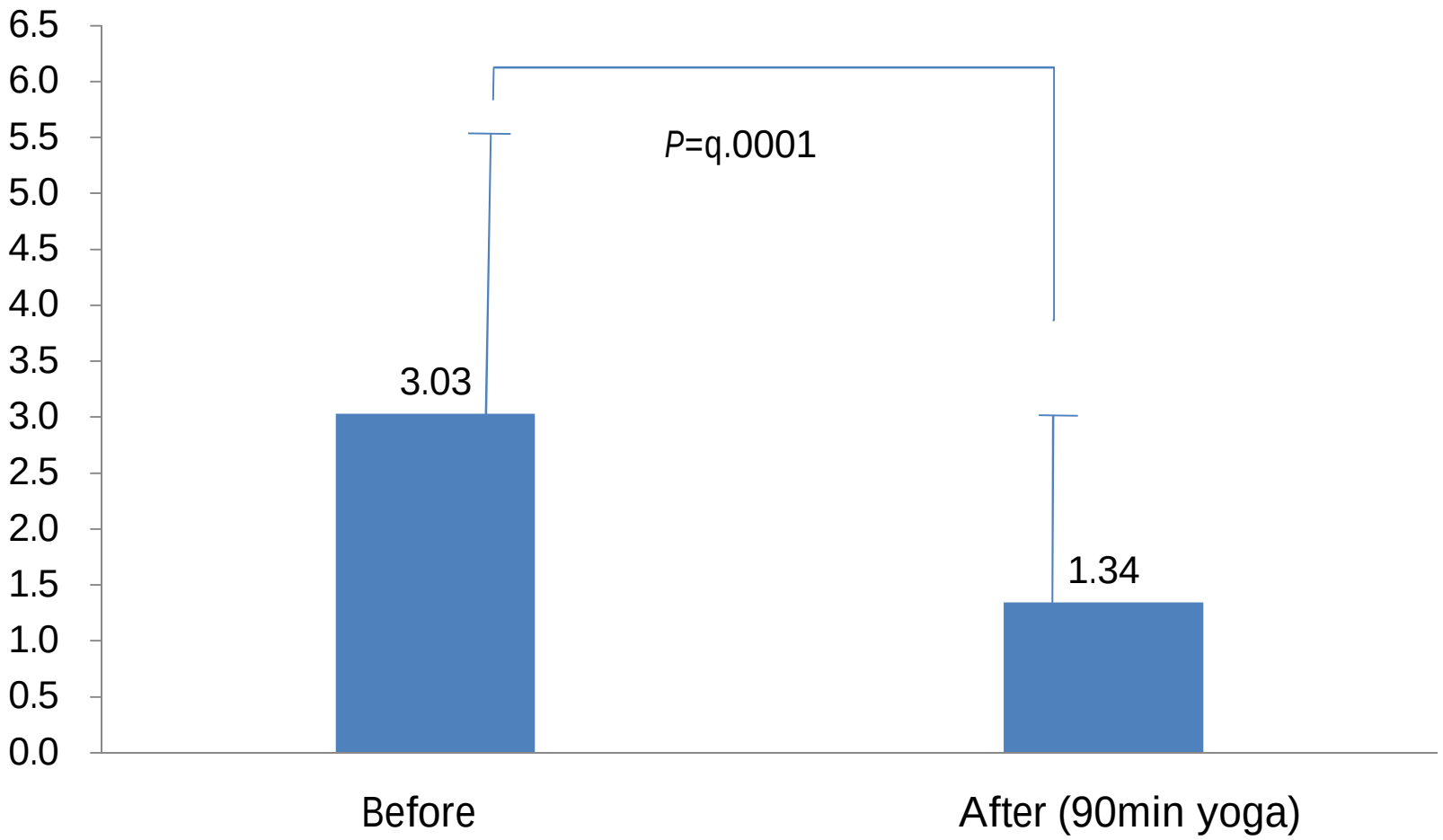
For children continued medication for prevention of migraine is not favorable

Yoga is a cognitive-behavioral therapy for

toward the prevention of migraine

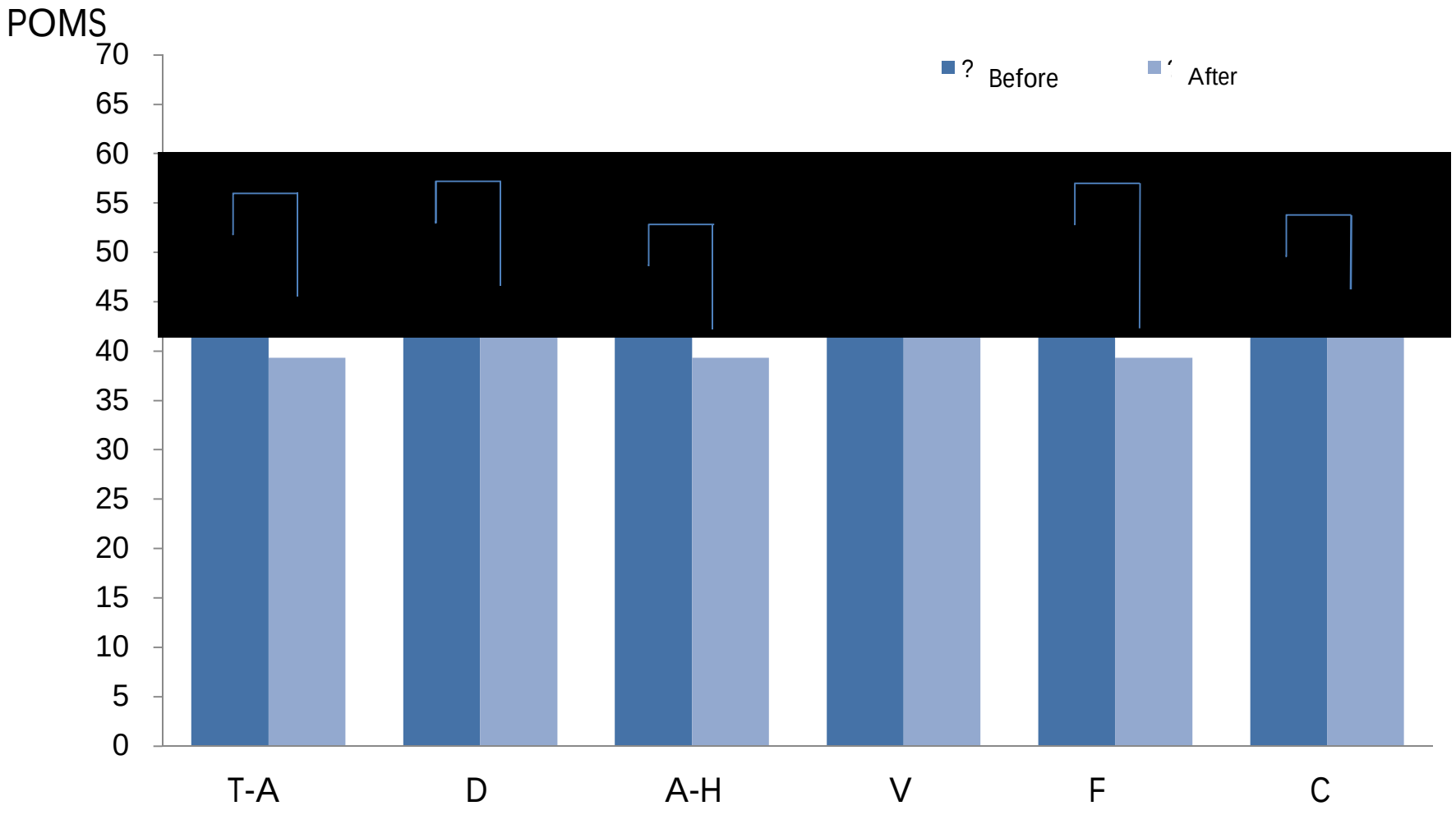
Promising preliminary data for treating chronic migraine in children

Changes in pain intensity



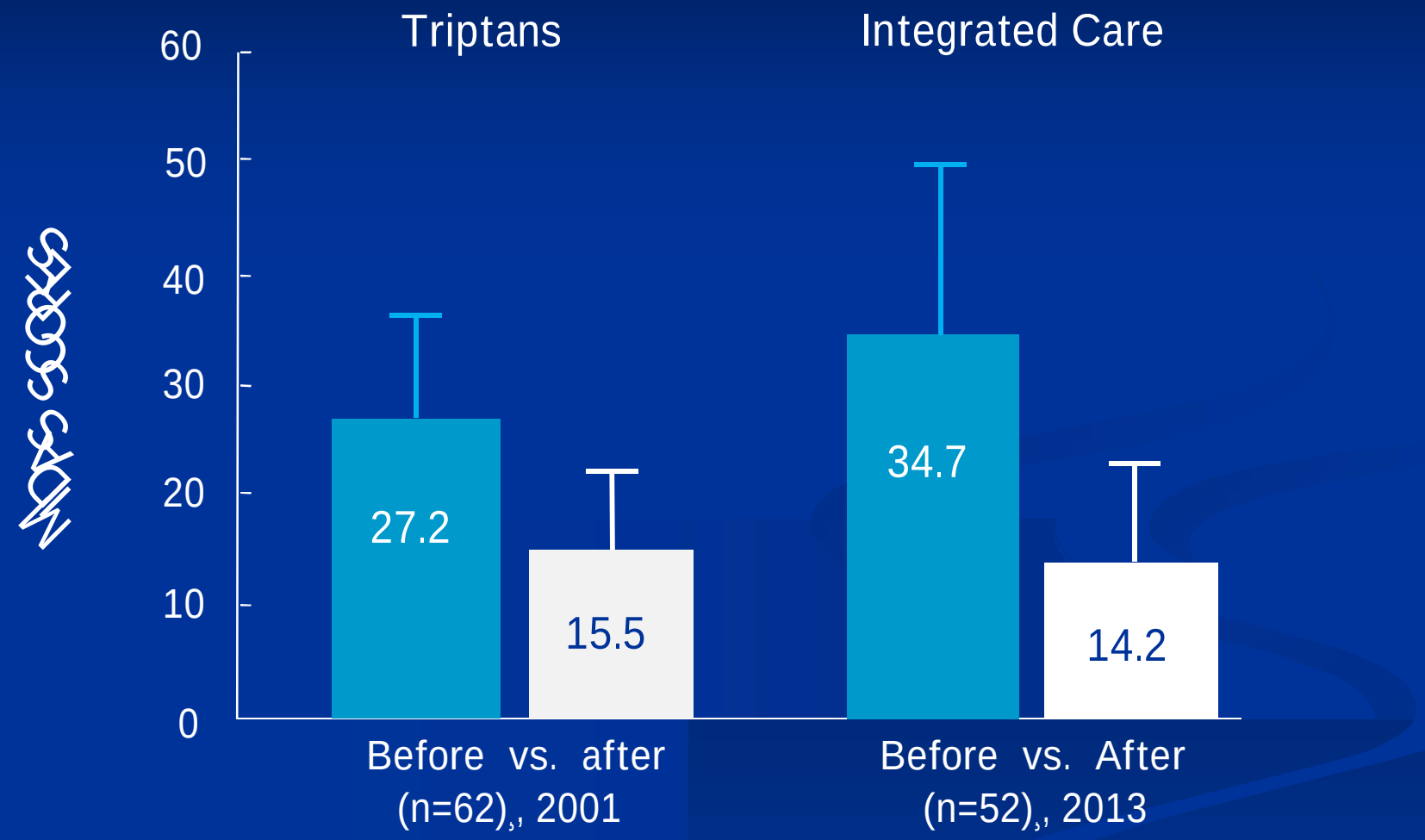
n=23 non-migrainous headache, 2012

Yoga changes Mood States



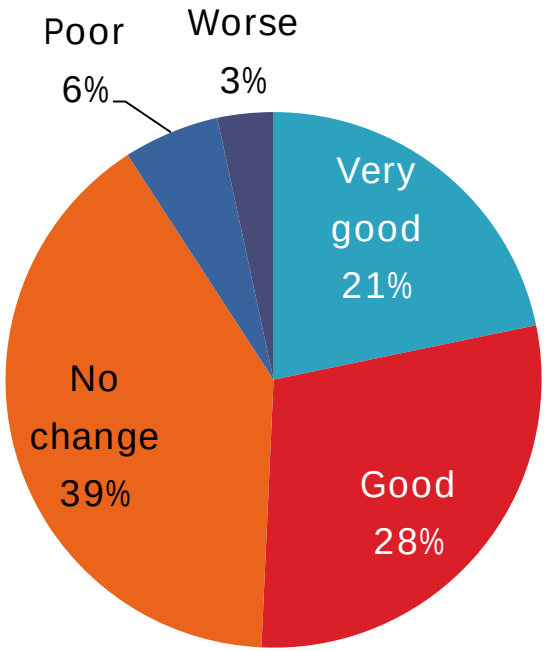
n = 23 Chronic migraine, 2012

Changes in MIDAS Scores after

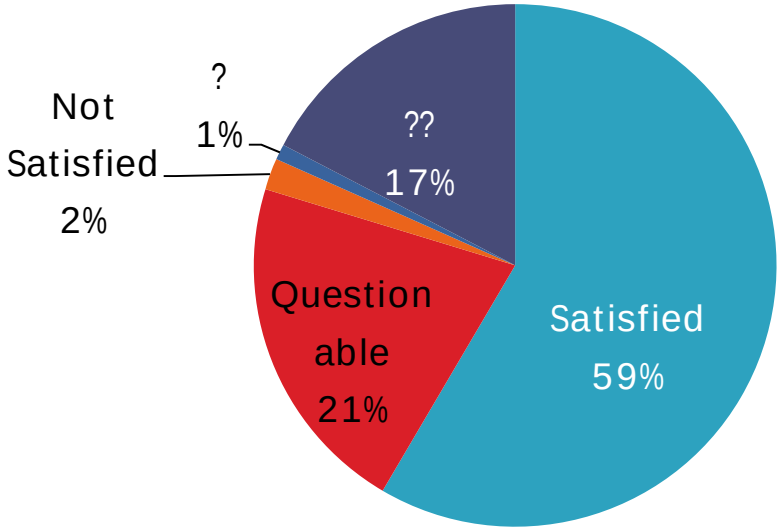


Integrated care :„ acupuncture, yoga, psyco-physiotherapy

When integrated care added (n=32)
Outcome measures vs. Satisfaction



Outcome measures
(headache days)



Patients' Satisfaction scale

Saitama Int Headache Center 2011

Further studies are necessary

- RCT for acupuncture
- Brain Blood Flow studies
- Critical evaluation of Yoga's role in headache medicine

It is a long way to an ideal "Specialized Headache Center"

But,

- IHS is supporting and encouraging education of headache specialists
- Guidelines for organization of headache service should be proposed by IHS

More Headache Specialists and Headache Centers are necessary for Better Headache Care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