

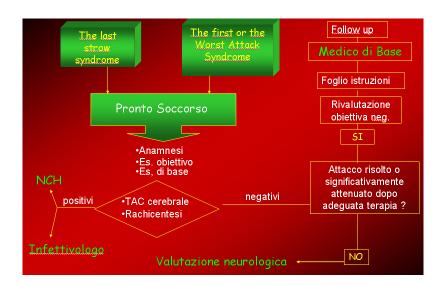
Pietro Querzani

Direttore UOC Neurologia, Ravenna AUSL della Romagna









Evidence-Based Diagnosis of Nontraumatic Headache in the Emergency Department: A Consensus Statement on Four Clinical Scenarios

Pietro Cortelli, MD; Sabina Cevoli, MD; Francesco Nonino, MD; Dante Baronciani, MD; Nicola Magrini, MD; Giuseppe Re, MD; Gianni De Berti, MD; Gian Camillo Manzoni, MD; Pietro Querzani, MD; Alberto Vandelli, MD, on behalf of the Multidisciplinary Group for Nontraumatic Headache in the Emergency Department

(Headache 2004;44:1-9)



1. Quale cefalea trattiamo?

- 2. Cosa si aspetta il paziente?
- 3. Come la trattiamo?

4. E dopo?



1. Quale cefalea trattiamo?

- 1. Cosa si aspetta il paziente?
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The goal of the emergency physician is to first differentiate a life-threatening secondary cause of headache

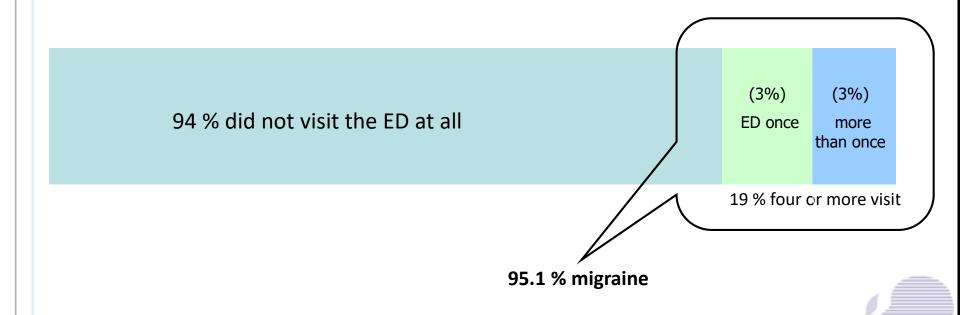


Use of the Emergency Department for Severe Headache. A Population-Based Study

Benjamin W. Friedman, MD, MS; Daniel Serrano, MA; Michael Reed, PhD; Merle Diamond, MD; Richard B. Lipton, MD

A headache questionnaire was mailed to a sample of 120,000 US households (30,721 reported severe headaches in previous 12 months)

A follow-up survey was mailed to a random subsample of <u>24,000 of these severe headache sufferers</u>



Headache Classification in Em. Dep.

Primary Headaches

- Migraine
- Tension-type
- Cluster headache

IHS: ...lasting 15'-180'

Primary
Headache
81% in ED

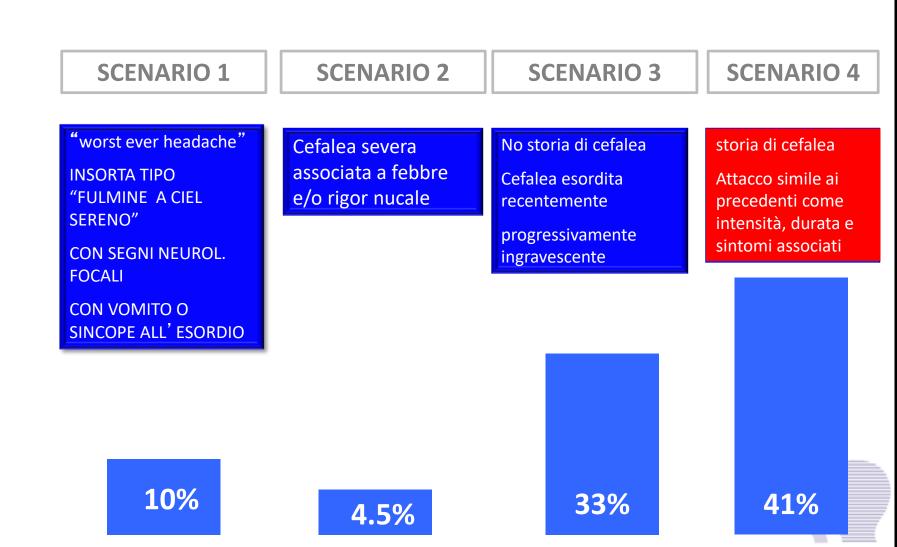
IHS: ...mild or moderate intensity

Status migrainosus

IHS: ...Attack of migraine with headache phase lasting more than 72 hours despite treatment

Evidence-Based Diagnosis of Nontraumatic Headache in the Emergency Department: A Consensus Statement on Four Clinical Scenarios

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A qualitative analysis of the needs and expectations of patients who present to the emergency department for management of migraine

What was **good** about medication you've received in the ER?

- Pain and headache relief
- Rapid onset of efficacy
- Prolonged duration of efficacy

What was **bad** about medication you've received in the ER?

- Headache relapse
- Lack of efficacy
- Incomplete relief
- Side effects
- Unpleasant reactions to medication

Imagine you could invent the perfect intravenous migraine medication. What would it do?

- Wish for a cure
- Efficacy
- Mitigate relapse
- Side effects
- Onset of efficacy
- Associated symptoms

If there was one thing that you could change about the IV medication you received, what would it be?

- Side effects
- Onset of efficacy
- Duration of efficacy



CURE ANY KIND OF HEADACHE OR NEURALGIA IN 15 MINUTES.

Positively Safe and Harmless.

Contain no OPIUM, MORPHINE, CHLORAL or other narcotic. Pleasant to take, and easily borne by the most delicate stomach.

Nervous or Sick-headache,

The headaches arising from over-eating, fatigue of body or mind, alcoholic excesses, exposure to the sun, and the various forms of neuralgia - all are alike relieved by this Remedy.

These everywhere prevalent complaints have long baffled the skill of our best mysicians. Scientific men have been untiring in their efforts to find SAFE, HARMLESS and effective remedy for these maladies; but, until revents, their efforts have been unavailing. To convince the public that a positive CURE for the various forms of Headache and Neuralgia has at last been found, the following testimonials are respectfully submitted:

Nonrolk, Va. June 30, 1891.

Yours of Oct, 20, with sample Headache Powders en-closed come to hand in dee time. We have given your samples a thir trial and find them to be all you claim for them. Will never the agency for this place, and will re-ommend them to all who complain of headache, and will not them in my bractice, Pieuse send me three dezen box-set at once. Yours, truly, D.J. L. E. Se. Au.

COULLOS, N. M., July 30, 1891.

Please send me '4 gross boxes of your Headache Pow-ders. They are giving perfect setisfaction. Yours, &c. Jos. Richauss,

HARRISSONRERG, VA., Oct. 2, 1891. Enclosed find postal note for \$1.0, to balance account four Powders give general satisfaction.

Lospectrally, I. PALL PLECTRIK & Co.

Your trial, C. W. BRYANT, M. D.

Yours of the 6th, with sample of Headache Powders rereceived this A.M., found me in bed with the headache, retook the sample myself, and in less than two hours I was
up and ready for business, where I generally have had no
keep in bed pretty much in foat all day. You may send me
sample order on your terms and I will been it.

Send me one dozen Headache Remedy at once, as I a
sample order on your terms and I will been it.

W. M. DURIAM.

Send me one dozen Headache Remedy at once, as I a
settledy out. The dozen you sent me rave entire sat
factless. CORRY, PA., December 10, 1890.

St. Petersburg, Fla April 9, 1891. Please send me three dozen Headache Powders. I have sold all I ordered before with full satisfaction.

Yours truly, Dr. H. MARTIN.

ARCHER, OHIO, April 10, 1800.

Enclosed find draft covering involve of Dec. 6th. Please seknowledge receipt and forward of one three dor. more Hendache Powders. The Powders are giving Al satisfaction. Respectfully,

Moberly, Mo., Sept. 5, 1891.

Please ship me at once one gross Headache Powders. The 3 dozen bought July 30 are all sold. Yours, &c., Louis Last.

SOUTH BERKELY, CAL., Oct. 5, 1801.

CICERO, N. Y., Oct. 22, 1806

QUEEN ANNE, Mo., Sept. 5, 180.

Send me one dozen Headache Remedy at once, as I am entirely out. The dozen you sent me gave entire satis-

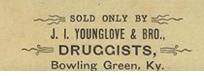
Yours resp'y.

IF YOU HAVE ANY DOUBT OF THE DENUMENESS OF THE ABOVE THE THRONALS, WITHTE TO ANY OR ALL OF THE PERSONS WHOSE KNAPS APPEAR, ENGLOSING STAMP, AND THEY WILL CHEEFULLY RESPOND.

49 PRICE 25 CENTS FER BOX, CONTAINING TEN POWDERS, #FOR SALE BY OUR AGENTS EVERYWHERE, OR SENT BY MAIL ON RECEIPT OF PRICE. 40

THE STANTON PHARMACAL CO.,

ONTARIO, OHIO.





- 1. Quale cefalea trattiamo?
- 2. Cosa si aspetta il paziente?
- 3. Come la trattiamo?
- 4. E dopo?



Cosa dobbiamo aver ben chiaro

The primary objective for the neurologist is deceptively simple: make the diagnosis...

Acute Headache in the Emergency Department, R. Davenport, J. Neurol. Neurosurg. Psychiatry 2002;72;33-37

The goal of emergency physician is to first determinate secondary causes of headache...

Benign headache management in the emergency department, The Journal of Emergency Medicine, Brit J. Long et al Vol. -, No. -, pp. 1–11, 2018;

Does a response to therapy predict the etiology of an acute headache?

Pain response to therapy should not be used as the sole diagnostic indicator of the underlying etiology of an acute headache

Clinical Policy: Critical Issues in the Evaluation and Management of Adult Patients Presenting to the Emergency Department With Acute Headache; Volume 52, n 4: October 2008, Annals of Emergency Medicine

Benign headache is a clinical diagnosis

Benign headache management in the emergency department, The Journal of Emergency Medicine, Brit J. Long et al Vol. -, No. -, pp. 1–11, 2018;



Management of Adults With Acute Migraine in the Emergency Department: The American Headache Society Evidence Assessment of Parenteral Pharmacotherapies

Serena L. Orr, MD; Benjamin W. Friedman, MD, MS; Suzanne Christie, MD, FRCPC; Mia T. Minen, MD; Cynthia Bamford, MD; Nancy E. Kelley, MD, PhD; Deborah Tepper, MD

1. Which Injectable Medications Should Be Considered First-Line Treatment for Adults Who Present to an ED With Acute Migraine ?

2. Do Parenteral Corticosteroids Prevent Recurrence of Migraine in Adults Discharged from an ED ?



1. Which Injectable Medications Should Be Considered First-Line Treatment for Adults Who Present to an ED With Acute Migraine ?

Medication, dose, route of administration	Summary of evidence	Conclusion about efficacy	Adverse effect	Recommendation May offer No reccommendations	
Acetylsalicylic acid 0.5– 1.8 gm IV	Class 1: none Class 2: benefit vs placebo, inferior too sumatriptan	Likely effective	No serious or frequent adverse events. Better tolerated than sumatriptan		
Dexamethasone 8–16 mg IV	Class 1: no difference vs placebo Class 2: benefit vs morphine	Possibly ineffective	No serious or frequent adverse event		
Diclofencac 75 mg IM	Class 1: none Class 2: none Class 3: effective vs placebo	Possibly effective	No serious or frequent adverse event	May offer	
Ketorolac 30–60 mg IM, IV	Class1: comparable with metoclopramide superior to VPA Class 3: no difference with meperidine	Likely effective	Well tolerated	May offer	
Metoclopramide 10–20 mg IV Class 1: No difference vs sumatriptan; no difference vs prochlorperazine		Highly likely to be effective	Akathisia occurs in a minority of patients. No differences vs active comparators	Should offer	

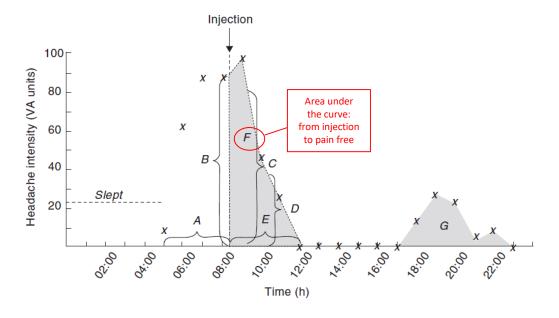
1. Which Injectable Medications Should Be Considered First-Line Treatment for Adults Who Present to an ED With Acute Migraine ?

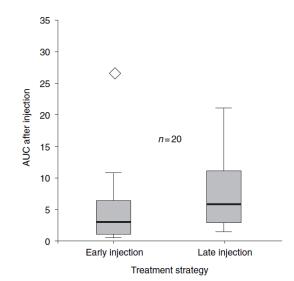
Medication, dose, route of administration	Summary of evidence	Conclusion about efficacy	Adverse effect	Recommendation May avoid	
Morphine 0.1 mg/kg IV	Class 1: none Class 2: No clinically significant difference vs dexamethasone Class 3: none	Possibly ineffective	No reported in class 2 study		
Prochlorperazine 10 mg IV	Class 1: No difference vs metoclopramide Superior to sumatriptan Class 2: Superior to octreotide Class 3: Superior to valproate	Highly likely to be effective	Akathisia and drowsiness were common	Should offer	
Sumatriptan 6 mg SC	Class 1: 4 studies superior to placebo Class 2: 8 studies superior to placebo Class 3: 5 studies superior to placebo	Highly likely to be effective	In ED based studies, adverse events in 50% of patients	Should offer	
Tramadol 100 mg IM	Class 3: no differences vs diclofenac	Insufficient evidence	13% of patients reported adverse events in class 3 study	No reccomendation	

Subcutaneous sumatriptan provides symptomatic relief at any pain intensity or time during the migraine attack

M Linde^{1,2,3}, A Mellberg^{1,3} & C Dahlöf^{1,3}

¹Gothenburg Migraine Clinic, ²Cephalea Pain Centre and ³Institute of Clinical Neuroscience, Sahlgrenska Academy, Göteborg University, Gothenburg, Sweden





2. Do Parenteral Corticosteroids Prevent Recurrence of Migraine in Adults Discharged from an ED?

Medication, dose, route of administration	Summary of evidence	Conclusion about efficacy	Adverse effect	Recommendation
Dexamethasone 8 - 24 mg IV	Class 1: Meta-analysis of 3 placebo controlled class 1 studies demonstrated Benefit Class 2: Benefit vs morphine Class 3: No difference vs valproic acid	Highly likely to be effective	Dizziness and brief burning pain more common in dexamethasone group	Should offer

Dexan		Dexamethasone Control		Odds Ratio		Odds Ratio	
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% CI
Donaldson 2008	21	57	18	42	30.5%	0.78 [0.34, 1.76]	
Friedman 2007	64	102	69	87	47.0%	0.44 [0.23, 0.85]	-
Jones 2003	14	34	17	36	22.6%	0.78 [0.30, 2.01]	-
Total (95% CI)		193		165	100.0%	0.60 [0.38, 0.93]	•
Total events	99		104				
Heterogeneity: Tau2 =	0.00; Chi2 =	1.56, 0	df = 2 (P	= 0.46	$(1)^2 = 0\%$	5	1 10 100
Test for overall effect:						0.0	1 0.1 1 10 100 Dexamethasone Favours Placebo



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2/3 of ED patients with migraine experience headache during **24 hrs after dischcarge**

Managing migraine, B W. Friedman, MD, Annals of Emergency Medicine, february 2017

3/4 of patients reported recurrence within 48 hrs after discharge

Treating Headache Recurrence After Emergency Department Discharge: A Randomized Controlled Trial of Naproxen Versus Sumatriptan Benjamin W. Friedman, MD, MS, Clemencia Solorzano, RPh, David Esses, MD, Shujun Xia, M; Annals of Emergency Medicine, 2010



La cefalea nel DEA

Diagnosi (Differenziale)

Follow-up presso Centro Cefalee

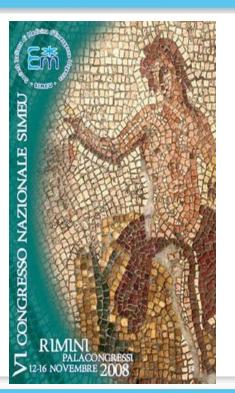


La cefalea nel DEA

Diagnosi (Differenziale)







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https://doi.org/10.1016/j.jemermed.2017.12.023



BENIGN HEADACHE MANAGEMENT IN THE EMERGENCY DEPARTMENT

Brit J. Long, MD* and Alex Koyfman, MD†

*Department of Emergency Medicine, San Antonio Military Medical Center, Fort Sam Houston, San Antonio, Texas and †Department of Emergency Medicine, The University of Texas Southwestern Medical Center, Dallas, Texas Corresponding Address: Brit J. Long, Mp., Department of Emergency Medicine, San Antonio Military Medical Center, 3841 Roger Brooke Drive, San Antonio, TX 78234

An ideal medication:

- provides rapid, sustained pain relief
- without complications
- and allows patients to return to normal daily activity.

However, this medication does not exist

Significant heterogeneity exists in ED headache management because of:

- the lack of strong recommendations,
- physician experience,
- concern for short-term side effects,
- institutional culture



CURE ANY KIND OF HEADACHE OR NEURALGIA IN 15 MINUTES.

POSITIVELY SAFE AND HARMLESS.

Contain no OPIUM, MORPHINE, CHLORAL or other narcotic, Pleasant to take, and easily borne by the most delicate stomach.

Nervous or Sick-headache,

The headaches arising from over-eating, fatigue of body or mind, alcoholic excesses, exposure to the sun, and the various forms of neuralgia - all are alike relieved by this Remedy.

These everywhere prevalent complaints have long baffled the skill of our best mysicians. Scientific men have been untiring in their efforts to find & SAFE, HARMLESS and effective remedy for these maladies; but, until recents, their efforts have been unavailing. To convince the public that a positive CURE for the various forms of Headache and Neuralgia has at last been found, the following testimonials are respectfully submitted:

NORFOLK, VA. June 30, 1891.
Your Headache Powders proved highly satisfactory, I emclose check to balance account. Send us two dozen more at once. Can add our name to testimonials.
Yours, truly, Norrota DAGA CA.

APPLETON CITY, Mo., April 1, 1881.
Encioned fined Money Order to balance bill of March II, Please send me two dogen more. I have a rood trade on the Powders. Respectfully, J. R.Racott.

DUNKDIN, PLA., Nov. 10, 1800.

COULLOS, N. M., July 30, 1891. Please send me 14 gross boxes of your Headache Pow-ders. They are giving perfect satisfaction. Yours, &c. Jos. RICHARDS.

HARRISSONBERG, VA., Oct. 2, 1891. Enclosed find postal note for \$1.50, to balance account Your Powders give general satisfaction.

Hospectally, 1. PAUL PLETCHER & Co.

CORRY, PA., December 10, 1890. Yours of the 6th, with sample of Hesdadeh Powders re-reduced this A.M., found me in bed with the headache. I took the sample myself, and in less than two heavs I was up and ready for business, where I generally have had to keep in bed pretty much it out all day. You may seed me sample order on your terms and I will beom it. Very respectfully, W. M. DURHAM.

St. Petersburg, Fla April 9, 1891. Please send me three dozen Headache Powders. I have sold all I ordered before with full satisfaction.
Yours truly, Dr. H. MARTIN. ARCHER, OHIO, April 10, 1800.

ARCHER, OHIO, April 39, 180.

My wife has been is well as of sick headache for many years. The attacks came on regularly every week or two, and were so severe that she would be confined to bed for two or three days at a time. All the remedies we ever year Harnaless Headacher Eveders. The first times of the times also that them she had to take tur, sowders before an got entire relief, but aime that time one powder has always been sufficient to eut short the attacks. You may refer any one doubting the truth of the anove statement to me and a will be sufficient to with the state of the same and a will be a sufficient to the short the state.

Enclosed find draft covering in voice of the 5th. Please seknowledge receipt and forward of one three doc, more Headach Powders, The Powders are giving A lantifaction, heaper fully,

Moberly, Mo., Sept. 5, 1891.

Please ship me at once one gross Headache Powders. The 3 dozen bought July 22 are all sold. Yours, &c., Louis Last.

SOUTH BERKELY, CAL., Oct. 5, 1801.

I enclose Money Order to balance account. Powder-are all claimed for them. Yours truly, C. W. BRYANT, M. D CICERO, N. Y., Oct. 22, 1800

Enclosed find \$1.00 in settlement of bill of Aug. 26. Your Hessache Remedy is just the thing. E. F. COVILLE.

QUEEN ANNE, Mo., Sept. 5, 160.

Send me one dozen Headache Remedy at once, as I am entirely out. The dozen you sent me gave entire satis-

Yours resp'y.

IF YOU HAVE ANY DOUBT OF THE GENUINENESS OF THE ABOVE THE TIMONALS, WITE TO ANY OR ALL OF THE PERSONS WHOSE NAMES APPEAR, ENGLOSING STAMP, AND THEY WILL DESPOYED.

49 PRICE 25 CENTS FER BOX, CONTAINING TEN POWDERS, #FOR SALE BY OUR AGENTS EVERYWHERE, OR SENT BY MAIL ON RECEIPT OF PRICE. 40

THE STANTON PHARMACAL CO.,

ONTARIO, OHIO.

