

# Epilepsy Research in Thailand

รศ.นพ.สมศักดิ์ เทียมเก่า

หัวหน้ากลุ่มวิจัยโรคลมชักโรงพยาบาลศรีนครินทร์

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สมาคมโรคลมชักแห่งประเทศไทย

อาจารย์สมชาย

อาจารย์อนันต์นิตย์

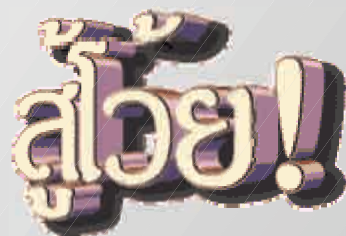
Srinagarind Epilepsy

Research Group

Faculty of Medicine

Khon Kaen university

# ความรู้สึก เมื่อทราบว่าต้องพูดเรื่องนี้



- รู้สึกดีมากจริง ๆ
- มีคำถามในใจ ว่าทำไมถึงต้องเป็นเรา
- หนักใจว่าจะนำเสนออะไร และอย่างไรดี
- ตั้งใจและพยายามอย่างเต็มกำลัง
- เพื่อก่อให้เกิดประโยชน์ต่อผู้ฟังทุกท่าน รวมทั้งตัวผมเอง

# วัตถุประสงค์

1. ทบทวนการวิจัยโรดลมชักในประเทศไทย
2. นโยบายการทำวิจัยในประเทศไทย
3. การตั้งกลุ่มวิจัยโรดลมชัก
4. องค์กรประกอบแห่งความสำเร็จ

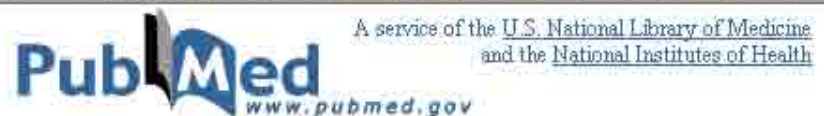
# รูปแบบการนำเสนอ

- นำเสนอข้อมูลตามความเป็นจริง

ไม่มีเจตนาที่จะบอกว่ากลุ่มวิจัยของตนแก่นิด้อย่างไร  
เพียงแค่ต้องการเล่า  
ประสบการณ์ที่ดี ๆ เท่านั้น

- ผู้ฟังจึงควรต้องไตร่ตรองให้ดีก่อนที่จะนำไปใช้





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# First article in PubMed

1: Lancet, 1988 Jul 9;2(8602):64-6.

THE LANCET Links FULL-TEXT ARTICLE

## Single dose phenobarbitone prevents convulsions in cerebral malaria.

White NJ, Looareesuwan S, Phillips RE, Chanthavanich P, Warrell DA.

Bangkok Hospital for Tropical Diseases, Faculty of Tropical Medicine, Mahidol University, Thailand.

48 patients over 6 years of age with strictly defined cerebral malaria were randomised to receive either a single intramuscular injection of phenobarbitone (3.5 mg/kg) or placebo in a double-blind, placebo-controlled study. Phenobarbitone significantly reduced the incidence of subsequent convulsions from 54% to 12.5%, without adverse effects. A single intramuscular injection of phenobarbitone is a simple, cheap, and effective method for prevention of convulsions in cerebral malaria.

PMID: 2898696 [PubMed - indexed for MEDLINE]



### Related articles

- ▶ Effect of phenobarbital on seizure frequency and mortality in childhood cerebral malaria: a randomised, con [Lancet, 2000]
- ▶ Continuous sodium valproate or phenobarbitone in the prevention of 'simple' febrile convulsion: [Arch Dis Child, 1980]
- ▶ Absorption of intramuscular phenobarbitone in children with severe falciparum malaria. [Eur J Clin Pharmacol, 1992]
- ▶ **Review** Routine anticonvulsants for treating cerebral malaria. [Cochrane Database Syst Rev, 2002]
- ▶ **Review** Management of seizures in children with falciparum malaria. [Trop Doct, 2004]

» See reviews... | » See all...

### Cited by 7 PubMed Central articles

- ▶ **Review** Parasitic central nervous system infections in immunocompromised hosts: malaria, n [Clin Infect Dis, 2006]
- ▶ **Review** Cerebral malaria. [J Neurol Neurosurg Psychiatry, 2000]



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- 1: [Arch Dis Child](#). 1989 May;64(5):734-5. [FREE full text article in PubMed Central](#) [Links](#)

**Water intoxication and hyponatraemic convulsions in neonates.**

**Vanapruks V, Prapaitrakul K.**

Department of Paediatrics, Pramongkutkalo Medical College, Bangkok, Thailand.

We studied two neonates fed diluted formula and excessive water who developed hyponatraemic convulsions; treatment included intravenous hypertonic saline and water restriction. Educating mothers is important to stop recurrences.

PMID: 2730130 [PubMed - indexed for MEDLINE]

PMCID: PMC1792012

**Related articles**

- ▶ [Water intoxication with hyponatremia and cramps in the newborn period](#) [Tidsskr Nor Laegeforen. 1990]
  - ▶ [Excess water administration and hyponatraemic convulsions in infancy.](#) [Lancet. 1992]
  - ▶ **Review** [Hyponatremic seizures secondary to oral water intoxication in infancy: association with corni](#) [Pediatrics. 1997]
  - ▶ [Water intoxication with seizures.](#) [Ann Emerg Med. 1985]
  - ▶ **Review** [Severe hyponatremia in the polydipsia-hyponatremia syndrome](#) [J Clin Psychiatry. 1994]
- » See reviews... | » See all...

**Cited by 1 PubMed Central article**

- ▶ [Desmopressin for bed wetting: length of treatment, vasopressin secretion, and response.](#) [Arch Dis Child. 1992]

**Recent Activity**

# Epilepsy Research in Asia

Thailand	102
Japan	4277
Korea	562
Lao	12 (France)
Malaysia	68
Singapore	136

PubMed:16 July 2009



# Epilepsy Research in Thailand

- Published in PubMed 102
- J Med Assoc Thai 53
- Other international journal 49
- Srinagarind Epilepsy Research Group 13

# Article in Thai Language

- ◎ 1985-2009
- ◎ Thai Index Medicus
- ◎ Chulalongkorn University Medical Library
- ◎ 179 titles

# Article in Thai Language

- ◎ 179 titles
- ◎ Review article 84
- ◎ Original article 83
- ◎ Case report 12
- ◎ Srinagarind Epilepsy Research Group 29

# การวางแผนทำวิจัย

- ◎ ศึกษาปัญหาใกล้ ๆ ตัวของเรา
- ◎ ทบทวนวรรณกรรมที่เกี่ยวข้อง
- ◎ ประชุมทีมระดมความคิด
- ◎ จัดทำโครงการวิจัย
- ◎ หาแหล่งทุนขอรับการสนับสนุน
- ◎ ต้องลงมือทำทันที ตามกรอบเวลา
- ◎ ต้องนำเสนอและตีพิมพ์ผลงานวิจัยทุกเรื่อง

# แนวทางการทำวิจัย

- ◎ รวมกลุ่มผู้สนใจ: ตั้งกลุ่มวิจัย
- ◎ R 2 R
- ◎ Multicenter

# การรวมกลุ่มผู้สนใจ

- ◎ ได้ความคิดหลากหลาย
- ◎ ร่วมมือและช่วยกันทำงาน
- ◎ เพิ่มศักยภาพ และความหลากหลาย
- ◎ สหสาขาวิชาชีพ
- ◎ ก้าวหน้าไปด้วยกัน

# Field of Epilepsy Research

- ⊙ Epidemiology
- ⊙ Clinical syndrome
- ⊙ Basic science
- ⊙ Clinical trial
- ⊙ Drug development
- ⊙ Knowledge , attitude , practice (KAP)
- ⊙ EEG
- ⊙ Specific problem : CNS infection

# โอกาสการทำวิจัยในประเทศไทย

1. Epidemiology
2. Etiology of epilepsy
3. Specific problems : ตัวอย่าง
  - Non-ketotic hyperglycemic induced seizure
  - CNS infection
  - HIV and epilepsy
  - Drug allergy
4. Knowledge , attitude, practice, and perception
5. Treatment in limited resources
6. Multi-centre clinical trials
7. Individual interest

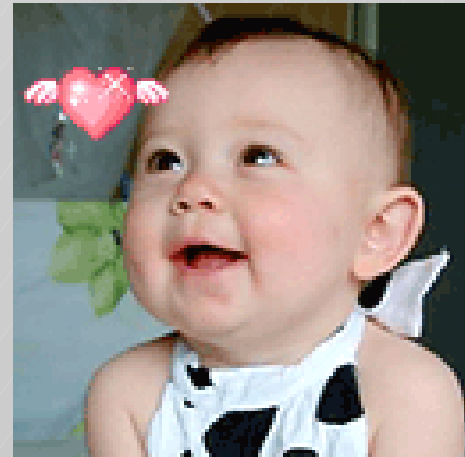


# นโยบายฝ่ายวิจัย พศ. 2552-2554

- ◎ รวบรวมข้อมูลการวิจัยในประเทศไทย
- ◎ สนับสนุนการศึกษาโรคลมชักในทุกด้าน  
และทุกกลุ่มบุคลากร
- ◎ ศึกษาอย่างเป็นระบบ และสหสถาบัน

# เป้าหมายที่ผมแอบหวังไว้

- ◎ นำข้อมูลมาวางแผนพัฒนาการรักษาและการวิจัยในประเทศไทย
- ◎ มีการตั้งกลุ่มวิจัยตามโรงพยาบาลต่าง ๆ
- ◎ สร้างเครือข่ายการวิจัยสหสถาบัน
- ◎ มีข้อมูลที่เป็นของประเทศไทยจริง
- ◎ เตรียมความพร้อมของสมาชิกในการศึกษาร่วมกับนานาชาติ



# Research Topics

- ① Epidemiology of epilepsy in Thailand
- ① Newly diagnosed epilepsy: etiology and outcome
- ① Predictive factors of SE outcome
- ① Rationale of AEDs used
- ① QOL of people with epilepsy(PWE)
- ① KAP of people regarding epilepsy
- ① SJS and TEN induced by AEDs: genetic study and cost-effective or not
- ① Pregnancy in PWE registration: clinical practice and outcome
- ① Epilepsy service in Thailand: patient view

# ปัจจัยแห่งความสำเร็จ

1. การรวมกลุ่มและสมาชิกกลุ่ม
2. การสนับสนุนจากหน่วยงาน
3. ความสม่ำเสมอ
4. เจ้าภาพในแต่ละเรื่อง
5. ความอดทนและพยายาม ไม่ย่อท้อ

# องค์ประกอบของทีม

มีความไว้วางใจ และจริงใจ  
ต้องไม่ระแวง แข่งขันกันเอง

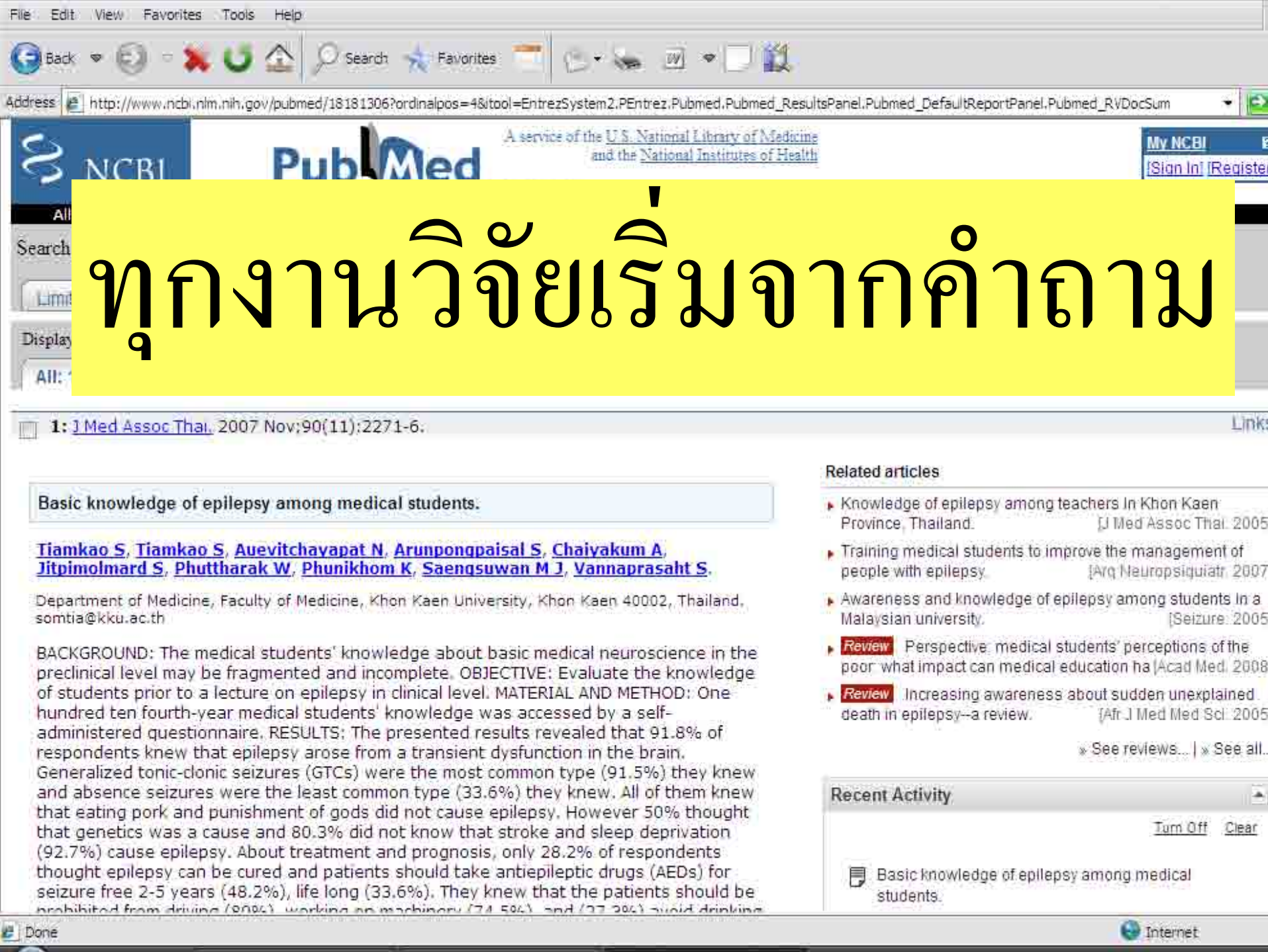


# Seizure Attacks While Driving: Quality of Life in Persons with Epilepsy

*Somsak Tiamkao, Kittisak Sawanyawisuth, Somchai Towanabut, Pongsak Visudhipun, Thai QOL Epilepsy investigators*

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**ABSTRACT:** *Objective:* To study the effect on quality of life (QOL) of a seizure attack while driving in persons with epilepsy (PWE). *Methods:* From four provincial and eight university hospitals in Thailand, we enrolled epileptic patients who drove a car or motorcycle or used to drive. The SF-36 questionnaire was used to evaluate QOL. The mean SF-36 score for all dimensions was calculated and compared with patients who either had or did not have a seizure attack while driving and in those who either had or had not been involved in a traffic accident while driving. *Results:* We had 245 adult PWE who drove a car or motorcycle or used to drive. Of these, 69 cases (28%) had a seizure attack whilst driving. Over half (36/69; 57%) had had seizure-related accidents, most of which were mild but about 20% needed hospitalization. PWE having a seizure attack while driving had a significantly lower QOL in four of the eight categories compared with patients who had not. PWE who had a seizure-related accident had a significantly lower mean value in the vitality category than those who did not. *Conclusions:* Seizure attacks while driving diminished QOL in PWE even though they only suffered minor injuries. Driving as a QOL issue should be discussed with patients. A good public transportation system would ease the need to drive.



# ทุกงานวิจัยเริ่มจากคำถาม

1: [J Med Assoc Thai.](#) 2007 Nov;90(11):2271-6.

## Basic knowledge of epilepsy among medical students.

[Tiamkao S](#), [Tiamkao S](#), [Auevitchayapat N](#), [Arunpongpaisal S](#), [Chaivakum A](#), [Jitpimolmard S](#), [Phuttharak W](#), [Phunikhom K](#), [Saengsuwan M J](#), [Vannaprasaht S](#).

Department of Medicine, Faculty of Medicine, Khon Kaen University, Khon Kaen 40002, Thailand.  
sontia@kku.ac.th

**BACKGROUND:** The medical students' knowledge about basic medical neuroscience in the preclinical level may be fragmented and incomplete. **OBJECTIVE:** Evaluate the knowledge of students prior to a lecture on epilepsy in clinical level. **MATERIAL AND METHOD:** One hundred ten fourth-year medical students' knowledge was accessed by a self-administered questionnaire. **RESULTS:** The presented results revealed that 91.8% of respondents knew that epilepsy arose from a transient dysfunction in the brain. Generalized tonic-clonic seizures (GTCs) were the most common type (91.5%) they knew and absence seizures were the least common type (33.6%) they knew. All of them knew that eating pork and punishment of gods did not cause epilepsy. However 50% thought that genetics was a cause and 80.3% did not know that stroke and sleep deprivation (92.7%) cause epilepsy. About treatment and prognosis, only 28.2% of respondents thought epilepsy can be cured and patients should take antiepileptic drugs (AEDs) for seizure free 2-5 years (48.2%), life long (33.6%). They knew that the patients should be prohibited from driving (80%), working on machinery (74.5%), and (27.2%) avoid drinking

### Related articles

- ▶ Knowledge of epilepsy among teachers in Khon Kaen Province, Thailand. [J Med Assoc Thai. 2005]
- ▶ Training medical students to improve the management of people with epilepsy. [Arq Neuropsiquiatr. 2007]
- ▶ Awareness and knowledge of epilepsy among students in a Malaysian university. [Seizure. 2005]
- ▶ **Review** Perspective: medical students' perceptions of the poor: what impact can medical education ha [Acad Med. 2008]
- ▶ **Review** Increasing awareness about sudden unexplained death in epilepsy—a review. [Afr J Med Med Sci. 2005]

» See reviews... | » See all...

### Recent Activity

Turn Off Clear

- Basic knowledge of epilepsy among medical students.

# งานประจำงานวิจัย

1: J Med Assoc Thai. 2006 Mar;89(3):362-7.

## Seizure presenting to the emergency department, Srinagarind Hospital.

[Tiamkao S](#), [Sawanyawisuth K](#), [Paowana W](#), [Saengsuwan J](#), [Arunpongpaisal S](#), [Chaiyakum A](#), [Phuttharak W](#), [Aaauevitchayapat N](#), [Vannaprasaht S](#), [Tiamkao S](#), [Phunikhom K](#), [Jitpimolmard S](#).

Department of Medicine, Srinagarind Hospital, Faculty of Medicine, Khon Kaen University, Thailand.  
somnia@kku.ac.th

The authors would like to evaluate the incidence, clinical manifestation, the appropriateness of treatment, and outcome of seizure at the emergency department (ED). All charts of patients who visited the ED of Srinagarind Hospital from 1 January 2003 to 31 December 2003 were reviewed. The profiles of patients and management at the ED were recorded. There were 33,508 cases who visited the ED with 104 cases (0.31%) presenting with seizure. Four cases (3.9%) were diagnosed as status epilepticus. Generalized tonic-clonic seizure was the most common type. Poor antiepileptic drug (AED) compliance with the low AED level was the main precipitating factor. The normal physical examination and routine laboratory tests were normal in the majority of patients. Phenytoin intravenous loading was the commonest initial treatment even in patients with non-status epilepticus. Fourteen patients (13.5%) were treated with intravenous diazepam even though seizures were discontinued. Sixty patients (57.7%) were discharged after seizure was controlled. The advice in seizure control was recorded in only 11 cases (10.6%). From this review, 12 patients presented at the ED for continuing medication without any seizures. In conclusion, seizure at the ED should be treated more appropriately with both laboratory investigation and drug treatment. Furthermore, patient education should be implemented.

PMID: 16696421 [PubMed - indexed for MEDLINE]

### Related articles

- ▶ Clinical policy: Critical issues in the evaluation and management of adult patients present[Ann Emerg Med.
- ▶ Appropriateness of intravenous loading dose of phenytoin treatment in Srinagarind Hospital. [J Med Assoc Thai.
- ▶ Emergency department management of patients with seizures: a multicenter study. [Acad Emerg Med.
- ▶ **Review** Overview: definitions and classifications of seizure emergencies. [J Child Neurol.
- ▶ **Review** Seizures and seizure-like states in the child: an approach to emergency management[Emerg Med Clin North Am.

» See reviews... | » See

### Patient Drug Information

- ▶ [Diazepam \(Diazepam Intenso<sup>®</sup>, Valium<sup>®</sup>\)](#) Diazepam is used to relieve anxiety, muscle spasms, and seizures and to control agitation caused by alcohol withdrawal.
- ▶ [Phenytoin \(Dilantin<sup>®</sup>, Dilantin<sup>®</sup> Infatabs<sup>®</sup>, Dilantin<sup>®</sup> Kapseals<sup>®</sup>, ...\)](#) Phenytoin is used to control certain types of seizures, and to treat and prevent seizures that may begin during or after surgery to the brain or nervous system. Phenytoin is in a class of medications called anticonvulsants.

Source: AHFS Consumer Medication Information

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