

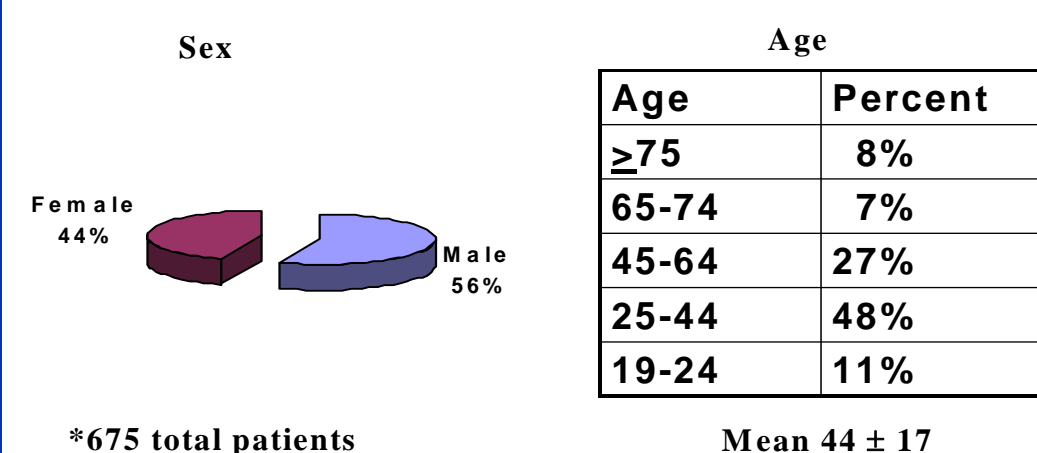
The Treatment of Adult Emergency Department Seizure Patients

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Introduction: Clinical Issues

- Limited literature on seizure management in the ED
- Often single antiepileptic drug (AED) can completely control seizures
- Improved treatment will prove cost effective

Results: Patient Demographics



Results: Most Common Medications

Medication	Percent of Patients
Antiepileptic drug (AED)	78%
Phenytoin	38%
Lorazepam	10%
Carbamazepine	9%
Phenobarbital	9%
Diazepam	5%
Fosphenytoin	4%
Gabapentin	2%

Results: Admission predictor, Age

Age	Percent Admitted
≥65	44%
19-64	18%

Pts 65 and older were 2.4 times more likely to be admitted (44% vs 18%, OR = 3.6, p = 0.001)

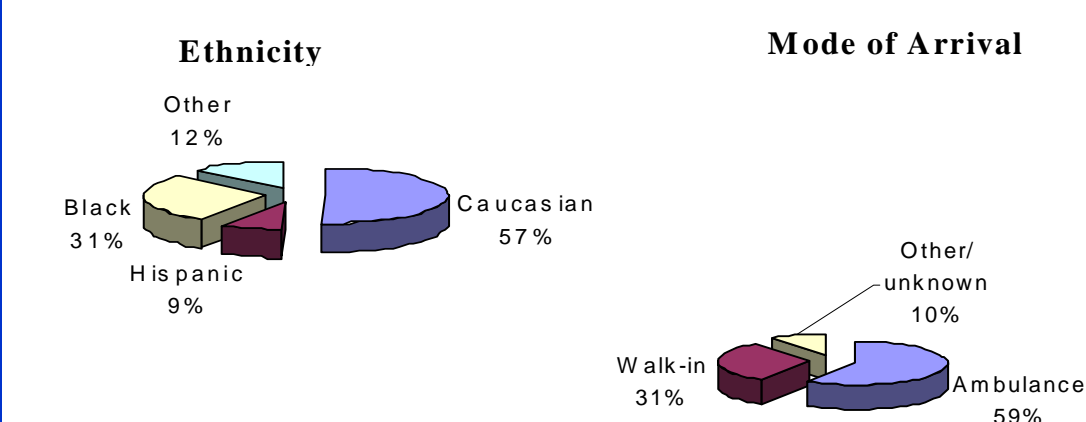
Conclusions: Treatment of Adult ED Seizure Pts

- Over three-quarters received an AED
- Phenytoin most commonly administered AED
- Elderly pts and those pts who received a benzodiazepine were more likely to be admitted
- Trend for pts receiving phenytoin or fosphenytoin to avoid admission

Introduction: Study Questions

- Which adult pts most often present to the ED with seizures?
- How are adult seizures most commonly treated?
- Are there factors that predict disposition?

Results: Patient Demographics



Results: Concurrent Diagnoses

Diagnosis	Percent of Patients
Non-compliance with medical Rx	4%
Alcohol abuse	3%
Syncope and collapse	3%
Abnormal toxicological findings	2%
Alcohol withdrawal	2%
Essential HTN	2%

Results: Admission predictor, ED Benzodiazepines

Benzodiazepines	Percent Admitted
Benzodiazepines	37%
No benzodiazepines	19%

Pts who received a benzodiazepine in the ED were 1.9 times more likely to be admitted (37% vs 19%, OR = 2.4, p = 0.001)

Discussion: Treatment of Adult ED Seizure Pts

- Aggressively loading with phenytoin to avoid seizure recurrence may allow pts to avoid admission

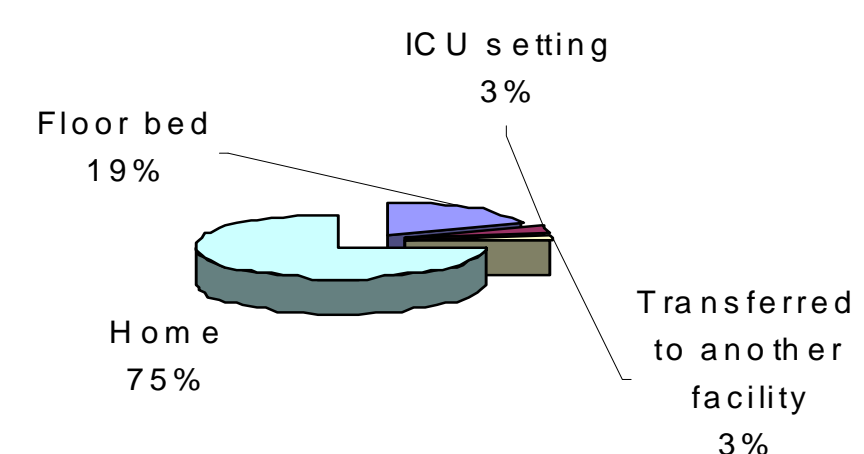
Methods: Study Design

- Data from 1997-2000 National Hospital Ambulatory Medical Care Survey (NHAMCS)
- Selected by ICD-9 codes
 - convulsions (780.3)
 - febrile convulsions (780.31)
 - other convulsions (780.39)
 - epileptic convulsions (345.10-345.91)
- Age > 18

Results: Diagnostics

Diagnostic Test	Percent of Patients
CBC	50%
CT scan	23%
Urinalysis	22%
Chest x-ray	15%
Blood alcohol concentration	8%
Toxicology	1%
EEG	1%
Lumbar puncture	1%

Results: Disposition



Results: Admission predictor, ED Hydantoins

Hydantoin	Percent Admitted
Hydantoin	19%
No hydantoin	24%

There was a trend for pts who received a hydantoin in the ED to avoid admission (19% vs 24%, OR = 0.7, p = 0.09)

Overall, hydantoins were administered 2.5 times more often than were benzodiazepines (42% vs 16%)

Recommendations: Treatment of Adult ED Seizure Pts

- Be aware of what factors suggest need for admission
- Analyze relationships in more complete database

