

# Antiepileptic drug adherence and persistence in children with epilepsy attending a large tertiary care children's hospital

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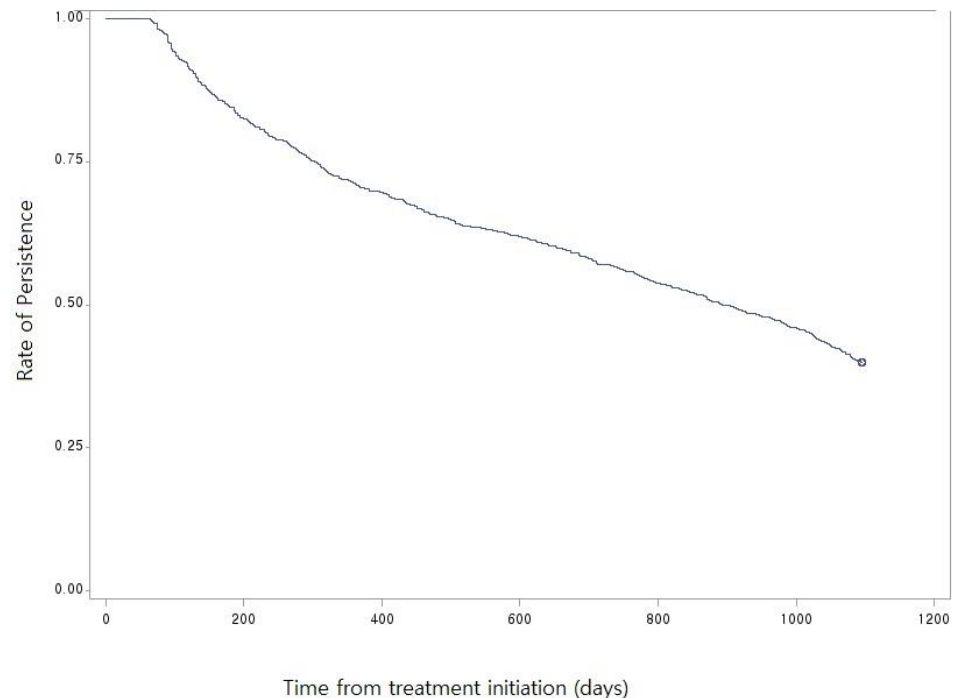
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# Antiepileptic drug adherence and persistence in children with epilepsy

- Proper medication-taking behaviour is vital to controlling seizures and is correlated with clinical outcome in epilepsy patients.
- Non-adherence to AEDs is estimated to range from 28% to 59% with different methods
- Medication-taking behaviours in prior studies were examined in small cohorts, and assessed using patient self-reporting, questionnaires, drug level monitoring, or electronic monitoring caps, which potentially affects patient medication-taking behaviour.
- Long-term persistence with AEDs in real-world paediatric populations using claims data has been evaluated in limited studies.
- This study aimed to evaluate medication-taking behaviours associated with persistence and adherence and identify predictive factors in relation to clinical outcome in a large number of paediatric patients attending a tertiary care hospital.

# Antiepileptic drug persistence in children with epilepsy over three years

- Over the first year, 830 patients (70.8%) were persistent with therapy. These patients continued to have their AED prescriptions issued without a gap of more than 60 days between prescriptions, and the cumulative persistence rate decreased to 57.0% and 40.0% over two and three years, respectively



# Factors affecting medication-taking behaviours

- Based on multivariate logistic regression analysis, the odds of being adherent and persistent over two years were significantly lower in toddlers (OR 0.26, 95% CI 0.13-0.53) than in adolescents.
- Patients who initially started treatment with a newer AED, relative to older AED initiators (OR 1.89, 95% CI 1.43-2.50), and patients diagnosed with a generalized seizure type (OR 1.45, 95% CI 1.04-2.02), relative to localized seizure types, were more likely to be adherent and persistent.

# Medication-taking behaviours and clinical outcome in paediatric epilepsy

- Among the patients included, a total of 85 patients (8.71%) experienced a clinical complication during the two subsequent years after the first year of treatment. Seizure-related ED visits and hospital admission was reported for 46 and 54 patients at the first and second subsequent year, respectively. Among them, 15 patients had a history of both ED visits and hospital admission.
- Multivariate Cox proportional hazards regression analysis revealed that treatment non-adherence at two years significantly increased the risk of hospitalisation or ED visits (adjusted HR 2.10, 95% CI 1.25-3.55).