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Prescribing Pattern of Antiepileptic Drugs in Children at Prince Sultan Military Medical City 2016

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Background

Epilepsy has a high incidence during childhood, with a median rate of 0.88 per 1,000 paediatric patients aged between birth and 14 years. The choice of anti-epileptic drugs (AEDs) treatment is based on various factors including patient age, type of epileptic seizures, comorbid illnesses, AED pharmacokinetic properties and occurrence of precipitating factors.

Materials and Methods

A retrospective study was conducted at Prince Sultan Military Medical City (PSMMC) in Riyadh using the available prescription data from January to December 2016 to examine the utilisation of conventional and newer AEDs in children in Prince Sultan Medical city.

Results

Among the 3,518 patients attending the paediatric neurology out-patient clinics during 2016, 504 patients (14%) used AEDs. Of the 504 children recruited, 333 children (66%) were on monotherapy and 169 (34%) were taking polytherapy. One hundred and fifteen children (35%) on monotherapy used conventional AEDs, while 73 children (43%) on polytherapy were on a combination of conventional and newer AEDs. The majority of children taking polytherapy took a combination of either two AEDs (116 children: 68%) or three AEDs (35 children: 21%).

Of the 333 children who were on monotherapy, 148 children (44%) received levetiracetam. For the 169 children who were on polytherapy, levetiracetam was the most commonly prescribed (120 children: 71%) followed by valproic acid (68 children: 40%) and carbamazepine (55 children: 33%).

A total of 1,474 antiepileptic drugs were used in 504 children (median 2 per child). Overall, 861 prescriptions (58%) were for newer AEDs and 613 prescriptions (42%) for conventional AEDs.

Conclusion

Newer AEDs are widely prescribed in children attending epilepsy clinic. Levetiracetam was the most commonly used AED as monotherapy and polytherapy, followed by valproic acid and carbamazepine. Monotherapy was used in over two-thirds of our population in PSMMC.

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