Screening Pattern of Carbamazepine Level on Admission to the Psychiatric Unit in Patients Receiving the Medication: Quality Improvement Project

Introduction

Accurate monitoring of psychotropic drugs blood level is imperative for proper clinical practice, to prevent side effects or relapse, to optimize treatment and ensure compliance. In 1995, Schoenenberger RA et al tried to develop explicit reliable criteria to decrease routine daily monitoring for anti-epileptic drugs in efforts to substantially reduce cost without missing clinical results [1], so did Affolter N et al in 2003 [2]. Both studies found that 27% and 48% respectively of all AED measurements had appropriate indications. The role of Therapeutic drug monitoring (TDM) of Antipsychotics and Antiepileptic drugs in Bipolar disorder was discussed and evaluated by Musenga A et al. [3] in 2009 where he focuses on currently available analytical TDM methods, reviewing and discussing their advantages and limitations. In 2009 a retrospective study was designed with Sharma S et al. [4], to assess the appropriateness and clinical utility of TDM at a tertiary care hospital. In 2013, Dalaklioglu S [5] published a study where he pointed out the need for interventions to improve the rational use of TDM, based on data from a teaching hospital in Antalya, Turkey.

A nationwide survey—the first of its kind in China—was conducted by Guo W et al. [6] to assess the status and lay foundation for improvement of TDM. His result pointed out that although current equipment and analytical methods meet the TDM need, much improvement is needed, particularly in new analytical method development, interpretation of results, consultation services, and quality control. The TDM expert group of the Arbeitsgemeinschaft für Neuro-psycho-pharmakologie und Pharmakopsychiatrie AGNP [7] issued consensus guidelines for best practice of TDM in psychiatry and neurology in 2004 and an updated version in 2011. In 2015, Hiemke C suggested that TDM could become a standard of care in psychiatry and neurology and exemplified the use of TDM consensus guidelines on patients receiving antidepressants. Also in 2015, Burianove I et al., conducted a study to consider the introduction of the pharmacologically active metabolite carbamazepine-10,11-epoxide (CBZ-E) to TDM, and found it might be beneficial for patients receiving CBZ with AED.

Objective

To evaluate the status of TDM as part of routine procedure upon admission and follow up for patients receiving Carbamazepine as a mood stabilizer or an anti-epileptic, in HMC psychiatry hospital, inpatient units.

References


