## ABSTRACT

**Background:** Lithium is a commonly prescribed drug, which is effective for bipolar affective disorder and difficult-to-treat depression. However, it has a narrow therapeutic index and carries recognised adverse effects on the kidneys and thyroid. To ensure that lithium is prescribed safely, regular monitoring of its side effects is deemed necessary. Over the years, local and overseas professional organisations have recommended guidelines on monitoring. Yet, overseas service audits found that, in practice, adherence was suboptimal. Little was known about the level of compliance to the guidelines in the local scene. The aim of this study is to conduct an audit on the monitoring practice for patients treated with lithium in the out-patient and in-patient psychiatric units of the Kowloon West Cluster, and to investigate the level of compliance to the hospital guidelines.

**Method:** An audit working group was set up to establish hospital guidelines on monitoring for patients taking lithium and to facilitate the whole auditing process. A baseline audit was performed in the in-patient and out-patient units of the Kowloon West Cluster to evaluate the practice of monitoring in all patients taking lithium during the one-year period from 1st April 2012 to 31st March 2013. Case notes and electronic records of the eligible patients were reviewed. The monitoring practice was compared against the recommended standards of practice. After the baseline audit, a series of quality improvement interventions, including monitoring chart, education lectures and individual reminders, were implemented to facilitate change. Re-audit was performed afterwards to assess for improvement in the monitoring practice and the level of compliance to the guideline recommendations during the subsequent one-year period from 1st August 2013 to 31st July 2014.

**Results:** Five hundred and sixty two patients were eligible for the baseline audit. Inadequate compliance of lithium monitoring was demonstrated, with monitoring compliant to the guideline standards achieved in 21.5% of patients for lithium level, 19.2% for renal function test, 10.3% for thyroid function test and 6.8% for body weight measurement. In the re-audit, 572 patients were eligible. There was a significant improvement of monitoring, in which the compliance achieved for lithium level, renal function test, thyroid function test and body weight measurement were by 28.3%, 27.3%, 21.9% and 42.8% respectively.

**Conclusion:** The baseline audit at the site of the present study revealed that monitoring for patients taking lithium was not performed to meet the international standards. In the re-audit, the improvement in the level of compliance in all of the four monitoring parameters suggested that the use of lectures, individual reminders and other quality improvement interventions may be useful in changing monitoring practice. Re-audits should be performed at regular intervals to monitor changes, to assess the effectiveness of interventions, and to determine further areas for improvement. Education to healthcare staff about the safe use of psychotropic drugs needs to be an ongoing process.

*Keywords*: lithium monitoring; clinical audit; quality assurance