Monitoring for Rare but Dangerous Side-Effects of Olanzapine Long-Acting Injection – A Completed Audit Cycle

Dr E.N. Smith, Dr N. Baruch, J. Wakelam, Dr M. Das


Introduction and Aims

Olanzapine long-acting injections are an effective way of delivering antipsychotic medication in maintenance treatment of schizophrenia. With every injection, there is a small but significant risk of post-injection syndrome, a rare but serious side effect characterized by potentially life-threatening sedation and/or delirium. Appropriate monitoring for post-injection syndrome is of paramount importance. This audit cycle aimed to establish appropriate standards for the monitoring of patients treated with olanzapine long-acting injections, and to assess, to what extent these standards were being implemented.

Background

Post injection syndrome occurs most commonly within 1 hour of injection. Occasionally it has been reported within approximately 3 hours of the injection. Manufacturers’ guidelines advise careful monitoring of patients for 3 hours after each injection.

Methods

We carried out three separate audits over a period of almost 1 year, in which monitoring of patients post-olanzapine injection was assessed and rated for a total of 84 separate injections in 8 inpatients in our initial audit, 10 inpatients in our second audit and 10 inpatients in our most recent audit. A monitoring form was designed and introduced following our first audit to aid clarity of injection monitoring.

Results – Audit 1

Our initial audit revealed that no ideal monitoring was taking place. It showed some level of monitoring in 57% of cases, with no documented monitoring found in 43% of cases. The sample size was 8 patients. Results were combined for monitoring over three consecutive olanzapine injections.

Results – Audit 2

Ideal monitoring was found in 36% of cases, with adequate monitoring noted in 24% of cases. The incidents of no documented monitoring were found to be 40%.

Results – Audit 3

Ideal monitoring had increased to 57% by April 2014. Incidents of no documented monitoring had decreased to 29% of cases. Adequate monitoring was found in 14% of cases.

Results for Post-Olanzapine Injection Monitoring Form Use

In the second and third audit, data was collected to assess the use of the specially designed post-intramuscular olanzapine injection monitoring form devised following the initial audit. The use of this form was found to be 23% for the second audit and 57% for the third audit.

Clinical Implications

The risks of administering long-acting olanzapine injections can be decreased by monitoring patients appropriately following the injection. The introduction of a specific post-olanzapine injection monitoring form appeared to improve monitoring and hence, safety. Whilst this audit was conducted in a secure inpatient setting, comprehensive post-injection monitoring on general adult psychiatry inpatient wards and in the community may be harder to maintain.

Conclusion

We conclude that service improvement has been demonstrated by this audit cycle, however, due to the potential serious side effect of post-injection syndrome, continuing to raise awareness of the necessity of appropriate monitoring and re-audit remain important.

References


Figure 1 – Monitoring of Patients Following Intramuscular Injection for the Initial Audit. The sample size was 8 patients. Results were combined for monitoring over three consecutive injections.

Figure 2 – Monitoring of Patients Following Intramuscular Injection for the Second Audit. The sample size was 10 patients. Results were combined for monitoring over three consecutive injections.

Figure 3 – Monitoring of Patients Following Intramuscular Injection for the Third Audit. The sample size was 10 patients. Results were combined for monitoring over three consecutive injections.

Figure 4 – Use of Specially Designed Post-Intramuscular Olanzapine Injection Monitoring Form for Second Audit. Sample Size = 10 patients. Results were combined for monitoring over three consecutive injections.

Figure 5 – Use of Specially Designed Post-Intramuscular Olanzapine Injection Monitoring Form for Third Audit. Sample Size = 10 patients. Results were combined for monitoring over three consecutive injections.