

| <h1>Clozapine</h1>           |  |
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| <b>Description</b>           | Clozapine is an atypical antipsychotic agent. It is used primarily in the treatment of schizophrenia. Clozapine is the active ingredient in Clozaril tablets.  |
| <b>Indication</b>            | Therapeutic drug monitoring. The use of clozapine is restricted to patients who are registered with the Clozaril Patient Monitoring Service (CPMS).  |
| <b>Additional Info</b>       | <p>Clozapine is the most effective antipsychotic drug for treatment-resistant schizophrenia. It is also useful when other anti-psychotic drugs cannot be tolerated (due to adverse neurological side-effects).</p> <p>Side-effects of clozapine therapy include hypersalivation, confusion, somnolence, constipation and elevated liver enzymes. Agranulocytosis (neutropenia) is a recognised complication. There is a risk of hypotension leading to renal failure and seizure, tachycardia and coma in overdose.</p> <p>Maximal plasma concentration is achieved within 1.5 - 2 hours of a therapeutic dose. Clozapine has a half-life of 12 hours. It is metabolised by N-demethylation, hydroxylation and N-oxidation. The N-demethylated metabolite, norclozapine, is present in plasma at similar concentrations to the parent compound, but has a longer plasma half-life.</p> |
| <b>Concurrent Tests</b>      | Full blood count (to monitor neutrophil level, white cell count and platelet count) and LFT.   |
| <b>Dietary Requirements</b>  | N/A.   |
| <b>Interpretation</b>        | <p>For treatment-resistant schizophrenia:<br/> <u>Clozapine levels</u><br/>           Target range: 0.35 – 0.50 mg/L<br/>           Risk of convulsions: &gt; 1.0 mg/L.<br/> <u>Norclozapine levels</u><br/>           Useful in monitoring adherence as concentrations average 70% of clozapine levels during normal therapy.</p> <p>Withhold therapy if WBC &lt; 3,500 mm<sup>-3</sup>. Stop therapy if WBC &lt; 3000 mm<sup>-3</sup> or granulocyte count &lt;1,500 mm<sup>-3</sup>.</p>  |
| <b>Collection Conditions</b> | Trough sample (pre-dose or minimum 6hrs post-dose). Requesting unit must provide a patient-specific drug data sheet with the sample (available from <a href="http://www.kingspath.co.uk">http://www.kingspath.co.uk</a> ).   |
| <b>Frequency of testing</b>  | Prior to commencing therapy, throughout treatment and for 4 weeks after complete discontinuation of clozapine.   |

