**VORICONAZOLE**

- Broad-spectrum, 2nd generation triazole antifungal.
- Active against: most Candida spp including fluconazole-resistant C. glabrata and C. krusei. Other yeasts and moulds including Aspergillus spp., Scedosporium sp. and Fusarium spp.

**WHEN TO CONSIDER TDM**

In all patients receiving voriconazole due to unpredictable, saturable kinetics and CYP2C19 genetic polymorphisms. TDM should be done regularly throughout treatment course. Consider TDM when starting or stopping interacting drugs.

**PHARMACOKINETICS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absorption</td>
<td>Oral: 65-96 %</td>
</tr>
<tr>
<td>Protein binding</td>
<td>58 %</td>
</tr>
<tr>
<td>Clearance</td>
<td>Clearance decreases at higher doses due to saturable metabolism.</td>
</tr>
<tr>
<td>Metabolism</td>
<td>- Hepatic – extensive</td>
</tr>
<tr>
<td></td>
<td>- Saturable metabolism via CYP 2C19 (major), 2C9 and 3A4.</td>
</tr>
<tr>
<td></td>
<td>- Also inhibits CYP3A4, 2C19 and 2C9 activity. (may have clinically relevant drug-drug interactions)</td>
</tr>
<tr>
<td>Renal</td>
<td>&lt;2 % unchanged</td>
</tr>
<tr>
<td>Elimination t½</td>
<td>Variable, dose dependent due to saturable pharmacokinetics. That is, dose increases lead to more than proportional increases in concentration.</td>
</tr>
<tr>
<td>Time to steady state</td>
<td>Dose dependent, but may be achieved earlier if given loading dose.</td>
</tr>
</tbody>
</table>

**SAMPLE COLLECTION TIME**

Collect samples at steady state: **Trough sample**

* Initial sampling within first 2-5 days of therapy, however may not be at steady state, therefore repeated sampling may be required within 2-5 days.

**REQUESTING & COLLECTION**

Collect 4 mL in a purple top (EDTA) tube (no gel separator).

**Important information required on request form:**

1) Time and date of last dose
2) Time since last dose change/commencement
3) Time of blood sample collection
4) Dosing regimen

**HANDLING & TRANSport**

Sample must be delivered to laboratory within 1 hour of collection. If not delivered to the lab within 2 hours of collection, centrifuge, separate plasma and freeze within 3 hours of collection.

**AVAILABILITY**

Test generally performed 3 times a week. Specific days and timing should be confirmed with SydPath.

**REFERENCE INTERVALS**

**Suggested Therapeutic Target:** [Prophylaxis & treatment]: Trough: >1 mg/L

**Toxic Range:** Trough: >4-6 mg/L

**NOTE:** A higher target (e.g. 2 mg/L) should be used if there is disease with poor prognosis (e.g. CNS infection, extensive disease, disseminated infection).

A trough concentration of ≤4-6 mg/L is recommended to minimise drug-related toxicity. Note higher probability of toxicity with higher concentrations.

**CONTACT**

Patient Results/Queries: (02)83829100. Further information: www.sydpath.com.au - Test Database

**INSTRUCTIONS FOR REFERRING LABORATORIES**

Centrifuge, separate plasma within 3 hours of collection, store and transport plasma frozen.

**Document approved:** 07/2017 R.Day

**References:**