Stanford Antimicrobial Safety and Sustainability Program  
Revision date 05/2017

Stanford Medication Usage Guide  
Ribavirin (oral)

Usage

- Ribavirin is FDA approved for the treatment of hepatitis C in combination with IFN-α.
- Off-label: treatment of severe respiratory infections with community-acquired respiratory viruses in immunocompromised patients. E.g.
  - Respiratory syncytial virus (RSV)
  - Metapneumovirus (MPV)
  - Parainfluenza virus (PIV)

Dosing

<table>
<thead>
<tr>
<th>CrCl</th>
<th>Oral Ribavirin Dosing Regimen for RSV, MPV, PIV (typical duration 5-10 days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;50</td>
<td>15 – 20 mg/kg/day in 2 to 3 divided doses; round to nearest 200 mg dose (max dose: 1800 mg/day)</td>
</tr>
<tr>
<td>30-50</td>
<td>200 mg TID – 400 mg BID&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>&lt;29, ESRD, IHD</td>
<td>No recommendations exist. Some experts recommend 200 mg daily&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>CRRT, PD</td>
<td>No recommendations exist. Consult ASP/ID pharmacist</td>
</tr>
</tbody>
</table>

<sup>a</sup> The prescribing information for Rebetol® (capsule) states that use is contraindicated if CrCl <50 mL/min. The prescribing information for Copegus® (tablet) states that the dose should be reduced in patients with CrCl ≤ 50 mL/min.

Pharmacokinetics/Pharmacodynamics

<table>
<thead>
<tr>
<th>Ribavirin pharmacokinetics</th>
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<tbody>
<tr>
<td><strong>Bioavailability</strong></td>
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<tr>
<td><strong>Distribution</strong></td>
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<tr>
<td><strong>Metabolism</strong></td>
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</tbody>
</table>
| **Half-life elimination** | Capsule: 24h (single dose), 298h (steady state)  
Tablet: 120-170h (single dose), 288h (multiple doses) |
| **Time to peak, serum**   | 3h (capsule)  
2h (tablet) |
| **Excretion**             | 61% urine, 12% feces  
Note: Plasma ribavirin is removed by hemodialysis with an extraction ratio of approximately 50%; however, due to its large V<sub>d</sub>, plasma exposure is not expected to change with hemodialysis |

Monitoring Parameters

- Re-evaluate therapy if adverse reactions occur e.g. clinically significant anemia necessitating transfusion may warrant discontinuation or dose decrease.
- Risk of may be increased in those with renal insufficiency, dialysis, low baseline Hgb levels, or concomitant therapy associated with causing bone marrow suppression.

Special Circumstances

- Hazardous drug: do not crush/open capsules/tablets. Product is available as oral solution
- Pregnancy FDA risk category X
References:

6. Lexi-comp

Document Information:

A. Original Author/Date: Lina Meng, PharmD, BCPS, BCCCP, Roy Lee, PharmD, BCPS, Emily Mui, PharmD, BCPS, Stan Deresinski, MD, 05/2017

B. Gatekeeper: Antimicrobial Stewardship Program

C. Review and Renewal Requirement
   This document will be reviewed every three years and as required by change of law or practice

D. Revision/Review History:

E. Approvals
1. Antimicrobial Subcommittee: 8/17/2017
2. P&T: 9/15/2017

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