Navigating Transitions: IV Epoprostenol to oral Treprostinil

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Navigating Transitions: IV Epoprostenol to oral Treprostinil

Michael Salinero RN, BSN; Tina Hyman RN, BSN; Margarita M. Pallares ARNP, MSN and Javier Jimenez MD, PhD

Background

- Historically IV prostacyclins were the only treatment option indicated for the pulmonary hypertension (PH) patient population.
- Central lines carry risks for infection, sepsis, line fractures, and pain at the insertion site which are associated with patient's reporting a reduced quality of life.
- Oral prostacyclins offer an optimal treatment plan with improved quality of life.
- There is a lack of clinical trials to support the transition from IV to oral therapies.

Purpose

- This case study details the transition from an IV Epoprostenol to oral Treprostinil over a seven week period.

Case Description

- A 54 y/o female with severe PAH, WHO group 1, NYHA class III.
- Tx:
  - PDE-5
  - type-A selective endothelin receptor antagonist,
  - IV Epoprostenol x 4 yrs
- S/E:
  - flushing
  - sinus congestion
  - GI upset, generalized edema
  - shortness of breath
  - headaches
- C/O:
  - central catheter discomfort
  - depression
  - poor quality of life

Transition Schedule Table

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Dose Details</th>
<th>Total Dose</th>
<th>Epoprostenol</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>05/23/16</td>
<td>Dose: 0.125mg po TID (use 1 tab of 0.125mg TID/daily)</td>
<td>0.375mg/day</td>
<td>18ng/kg/min</td>
</tr>
<tr>
<td>2</td>
<td>05/30/16</td>
<td>Dose: 0.5mg po TID (use 2 tabs of 0.25mg TID for a total of 6 tabs/daily)</td>
<td>1.5mg/day</td>
<td>14ng/kg/min</td>
</tr>
<tr>
<td>3</td>
<td>06/06/16</td>
<td>Dose: 1mg po TID (use 4 tabs of 0.25mg TID for a total 12 tabs/daily)</td>
<td>3mg/day</td>
<td>10ng/kg/min</td>
</tr>
<tr>
<td>4</td>
<td>06/13/16</td>
<td>Dose: 2mg po TID (use 2 tablets of 1mg TID for a total of 6 tabs/daily)</td>
<td>6mg/day</td>
<td>6ng/kg/min</td>
</tr>
<tr>
<td>5</td>
<td>06/20/16</td>
<td>Morning: 3.5mg (use 2.5mg tab + 1mg tab) Noon: 3.0mg (use 2.5mg tab + 0.5mg tab) Evening: 3.5mg (use 2.5mg + 1mg tab)</td>
<td>10mg/day</td>
<td>3 ng/kg/min</td>
</tr>
<tr>
<td>6</td>
<td>06/27/16</td>
<td>Morning: 4mg (use 2.5mg tab + 1mg tab + 0.25mg tab) Noon: 4mg (use 2.5mg tab + 0.25mg tab) Evening: 4.5mg (use 2.5mg tab + 2 tabs of 1mg)</td>
<td>12.5mg/day</td>
<td>1.5ng/kg/min</td>
</tr>
<tr>
<td>7</td>
<td>07/04/16</td>
<td>Morning: 4mg (use 2.5mg tab + 1mg tab + 2 tablets of 0.25mg) Noon: 5mg (use 2 tabs of 2.5mg) Evening: 5mg (use 2 tabs of 2.5mg)</td>
<td>14mg/day</td>
<td>Stop infusion</td>
</tr>
</tbody>
</table>

Methods

- A comprehensive plan of care was developed by a multidisciplinary healthcare team.
- Weekly transitions were closely monitored by the cardiologist and the Outpatient Pulmonary Hypertension Clinic staff.
- The patient’s mental and physical well being was evaluated and documented during the seven week period.

Results

- The patient was successfully transitioned from IV to oral therapy with no adverse events or functional decline.
- The patient reported having an improved quality of life and was able to resume swimming and other hobbies that had been contraindicated when IV therapy was initiated.

Implications for Practice

- Patients meeting certain criteria can safely be transitioned from IV to oral prostacyclins.
- Reduction of infection due to central line removal.
- Reduced risk of abrupt discontinuation of treatment due to central line/pump malfunction.
- Improved quality of life
- Delivering more cost effective care by reducing the need for pump maintenance

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