One of the services that pharmacy residents participate in at Providence Pharmacy Monroe is Shared Medical Appointments (SMAs) for patients on opioid analgesics for chronic pain. SMAs at our clinic were developed through a previous pharmacy residency project and provide an opportunity for chronic pain patients of one provider to be seen in the presence of other patients. At the SMAs, pharmacy residents present on a topic related to pain. Our SMA presentation topics include one on a general overview of chronic pain, insomnia and chronic pain, and exercise for chronic pain. SMAs provide an opportunity for patients to learn more about their chronic disease and frequently stimulate group discussions on patients’ personal experiences with pain. The pharmacy resident co-leading the SMA is available to answer any general questions patients may have and assist with managing side effects from opioid analgesics.

I have the opportunity to work at QFC pharmacy sites as well as assisted living communities with UW Pharmacy Cares. My primary practice site is at the corporate office in Bellevue, where I attend weekly meetings to assess pharmacy sales progress, support pharmacists by answering drug information questions and prepare for comprehensive medication reviews and travel consultations appointments. Once weekly, I practice community dispensing at Edmonds and provide consulting services with UWPC.

I have been providing health screenings to my associates and their family members. After blood pressure, blood glucose, cholesterol levels, and body mass index were obtained, I explain the importance of the values and educate them on how to achieve and maintain healthy lifestyles. The pharmacist-run health coaching programs – smoking cessation, diabetes, heart healthy, and fitness, nutrition & weight loss – were also offered to those who would benefit from them. The goal of this service is to make employees and their family members aware of their health status and provide services to help them achieve better health and better quality of life.
**Drug Information**

**New LDL-lowering Agent: Alirocumab (Praluent®)**

*By Stephanie Huynh (Providence Pharmacy Monroe)*

The FDA approved alirocumab (Praluent®) on July 24, 2015 for use as an adjunct to diet and maximally tolerated statin therapy in patients with clinical atherosclerotic cardiovascular disease requiring additional LDL-C lowering or patients with heterozygous familial hypercholesterolemia.²

The initial dose of alirocumab is 75 mg subcutaneously once every 2 weeks. If reduction of LDL is inadequate on this dose, the dose may be increased to the maximum of 150 mg every 2 weeks. It is recommended to recheck LDL levels within 4-8 weeks of initiating or titrating to assess response.³

The ODYSSEY OPTIONS I trial sought to evaluate the LDL-lowering effect of alirocumab + atorvastatin compared to other antihyperlipidemic agents. Enrolled patients received atorvastatin 20 mg or atorvastatin 40 mg daily for 4 weeks prior to randomization to a) add-on therapy with alirocumab 75 mg every 2 weeks, b) add-on therapy with ezetimibe 10 mg daily, or c) doubling of atorvastatin dose to 40 or 80 mg daily for 24 weeks. The study found that among the atorvastatin 20 mg and 40 mg arms, add-on alirocumab reduced LDL-C levels by 44.1% and 54.0% from baseline, more so than any other add-on therapy.¹

Initial evaluations from the ODYSSEY Long Term Study on the safety of alirocumab after 78 weeks list higher rates of injection-site reactions, myalgias, neurocognitive events, and ophthalmologic events in the alirocumab group compared to placebo, but data on the effect on clinical outcomes is still pending. The results of the ODYSSEY Outcomes Trial are anticipated to be available December 2017 and will provide data on the effect of alirocumab on outcomes such as first occurrence of CHD death, nonfatal MI, fatal and nonfatal ischemic stroke, and unstable angina requiring hospitalization.

Despite early promising data from the ODYSSEY trials, alirocumab will likely have a limited role in the treatment of hyperlipidemia, serving as a last-line agent for high ASCVD risk or familial hypercholesterolemia patients. For starters, selecting the appropriate statin intensity can achieve comparable reductions in LDL-C, and there is evidence that reduction in ASCVD risk correlates with relative reductions in LDL-C.⁶ Statins have been shown to improve cardiovascular outcomes at a significantly lower cost to the patient compared to the estimated annual $14,600 for alirocumab therapy. Until alirocumab’s place in therapy and effect on clinical outcomes is better understood, focus should be placed on optimizing statin therapy and other antihyperlipidemic therapies and emphasizing patient adherence.

Alirocumab is a monoclonal antibody and the first in its class, exerting its effects through inhibiting proprotein convertase subtilisin kexin type 9 (PCSK-9). Inhibition of PCSK-9 prevents degradation of LDL-C receptors in the liver resulting in increased LDL reuptake from the blood.²

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**Drug Information**

**Tapering Off Long-Term Benzodiazepine Use**

*By Kay Chan (QFC Pharmacy)*

Benzodiazepine discontinuation should be gradual to prevent withdrawal symptoms. There is no optimum rate of tapering; rather, the withdrawal rate is dependent on each patient. Flexibility of slowing down is needed if withdrawal symptoms become too disturbing for the patient. Psychological interventions, such as cognitive-behavioral therapy, may be beneficial for aiding the discontinuation process and preventing relapse. Adjuvant medications may improve tapering success rates, but the available data are insufficient for recommendations.

Substitution of diazepam for another benzodiazepine is used in tapering studies. The reason for using diazepam is the availability of solution formation which is more practical since it is a long-acting compound, and withdrawal appears to be smoother due to less rebound symptoms and may be stopped abruptly when a low dose (5-10mg/day) is reached. Diazepam is dosed three to four times a day, so the total daily dose will be divided.  

The rate of tapering and specific dose reductions should be adjusted according to patient tolerance. The studies did not have different tapering schedules for different indications. The suggested schedules are:

- Decrease 25% of initial dose every 2 weeks until lowest available dose is reached.
- Decrease 25% of initial dose for the first 2 weeks, then 10% each week until discontinuation.
- A 6-month schedule for patient who have tried but failed to withdraw previously. Use diazepam formulations (tablets or solution) for dosage tapering.

**Example of a 6-month schedule using diazepam:**

<table>
<thead>
<tr>
<th>Week</th>
<th>Dosage (mg/day)</th>
<th>Decrease in mg/day</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Starting dose (eg. Diazepam 15mg/day or equivalent)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>15 → 11</td>
<td>4 mg/day</td>
</tr>
<tr>
<td>4</td>
<td>11 → 8.5</td>
<td>2.5 mg/day</td>
</tr>
<tr>
<td>6</td>
<td>8.5 → 6</td>
<td>2.5 mg/day</td>
</tr>
<tr>
<td>8</td>
<td>6 → 4.75</td>
<td>1.25 mg/day</td>
</tr>
<tr>
<td>10</td>
<td>4.75 → 3.5</td>
<td>1.25 mg/day</td>
</tr>
<tr>
<td>12</td>
<td>3.5 → 2.5</td>
<td>1 mg/day</td>
</tr>
<tr>
<td>14</td>
<td>2.5 → 2</td>
<td>0.5 mg/day</td>
</tr>
<tr>
<td>16</td>
<td>2 → 1.5</td>
<td>0.5 mg/day</td>
</tr>
<tr>
<td>18</td>
<td>1.5 → 1</td>
<td>0.5 mg/day</td>
</tr>
<tr>
<td>20</td>
<td>1 → 0.75</td>
<td>0.25 mg/day</td>
</tr>
<tr>
<td>22</td>
<td>0.75 → 0.5</td>
<td>0.25 mg/day</td>
</tr>
<tr>
<td>24</td>
<td>0.5 → 0.25</td>
<td>0.25 mg/day</td>
</tr>
<tr>
<td>26</td>
<td>Stop</td>
<td>0.25 mg/day</td>
</tr>
</tbody>
</table>

It is recommended to taper slower during the latter half!

Cognitive-behavioral therapy may aid the benzodiazepine discontinuation process and prevent relapse. The Anxiety and Depression Association of America provides resources that offer assistance for treatment.
New LDL-lowering Agent: Alirocumab (Praluent®) References:


Tapering Off Long-Term Benzodiazepine Use References:


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