

What's Hot in Parkinson's Disease?

A Future without Pills? The Latest on Pill-Free Alternatives

Ask a patient with Parkinson's disease (PD) to place a single day's pills into the palm of one hand, and chances are that might be harder than you think. Although some patients in the early stages of the disease require only two or three doses of a dopaminergic drug each day, as the disease progresses most patients will need to take many more pills. Fortunately, doctors have a growing arsenal of therapies for the treatment of PD. Today, two new methods of delivering medication—skin patches (transdermal) and intestinal gel formulations—have the potential to lessen the “pill burden” faced by many patients.

Transdermal dopaminergic patches—Instead of taking oral preparations or using injectables several times a day, some patients may be able to use a once-a-day alternative in the form of a “patch”—a bandage soaked with a drug that is absorbed by the skin. This patch formulation is similar to pills of other dopamine agonists (pramipexole and ropinirole). However, the patch has advantages over the oral form. It provides a continuous and slow delivery of the drug into the bloodstream, it's simpler to use, and it doesn't cause negative drug-food interactions. In addition, fewer sleep disturbances and improved early morning functioning may be added benefits for some patch users.

In 2008, the Neupro patch (rotigotine transdermal system) was recalled from pharmacies by the FDA because of a small number of reports of crystallization of the drug. Recently, it was reintroduced to the U.S. market following improvements. The side effects are roughly identical to other dopamine agonists, and all of the negative effects associated with dopamine agonists such as leg swelling, nausea, sleepiness, etc., have been observed with rotigotine.

Older patients and those with histories of hallucinations, impulse control and other behavioral or thinking disorders should only use this method with great caution. Extended release preparations of the pill form of dopamine agonists have become available recently, and are an option for patients who have adverse reactions to the patch or a preference for a pill.

Pump-based

therapy

—A therapy fresh out of clinical trials in the U.S. is Duodopa. Duodopa is a gel containing the drugs levodopa and carbidopa that is released directly into the small intestine through a surgically placed tube. The gel comes with a small, portable pump and medicine cartridge worn in a hip bag. The intestinal gel enters the body through a surgically placed tube in the abdomen. Duodopa has been approved for use in Europe since 2004. As yet, it is not available in the U.S., but could be in the near future thanks to the research currently underway.

Clinical trials suggest that this therapy significantly improves on time and reduces on-off fluctuations and dyskinesias in patients with advanced PD. This method of delivery may supply a more uniform release of medication into the bloodstream. Duodopa may offer an alternative to DBS, avoiding brain surgery; however, Duodopa does require very careful attention to daily pump management, skin care (surrounding the port where the tube enters the body) and medication refills. Some studies have found high rates of device-related problems with the intestinal tube (clogging, kinking). Despite these tube-related issues, Duodopa will likely be a great choice for many patients with severe on-off fluctuations and dyskinesias that cannot be managed with existing oral or patch therapies, as well as for those who do not wish to undergo DBS surgery. And it will, in most cases, allow for discontinuation of oral PD drugs.

Author: Michael S. Okun, MD, NPF National Medical Director

Read Dr. Okun's monthly column, "What's Hot in PD?" online at www.parkinson.org/whatshot.

