

## **New Drug Indicated for Medical Procedures in Patients with Chronic Liver Disease**

On May 21, 2018, the Food and Drug Administration (FDA) approved a new medication for patients with chronic liver disease who have low levels of blood platelets. Doptelet (avatrombopag) is used in these patients before a medical procedure to reduce the risk of bleeding. This is the first medication approved by the FDA for this use. Avatrombopag is an orally bioavailable medication that increases platelet counts through agonistic effects on thrombopoietin receptors. The medication does not compete with thrombopoietin and has an additive effect with thrombopoietin on platelet production.

Doptelet comes in 20 mg tablets and is indicated for patients with the following: chronic liver disease, a platelet count less than  $50 \times 10^9/L$ , and who are scheduled to undergo surgery. The dosage to be administered depends on the platelet count of the patient. If the platelet count is less than  $40 \times 10^9/L$ , the patient should receive 60 mg for five days. A five day course of a 40 mg dose is recommended for patients with a platelet count between  $40 \times 10^9/L$  and  $50 \times 10^9/L$ . The manufacturer recommends performing the surgery between five and eight days of the last dose to ensure platelet counts do not begin to decrease before the surgery is completed. The only precautions that have been recognized are thrombotic and thromboembolic complications in patients with chronic liver disease. It is recommended to monitor platelet counts and for thromboembolic events and treat patients appropriately. Use in pregnancy may cause harm to the fetus and use in lactation is not recommended during treatment. Two clinical trials (ADAPT-1 and ADAPT-2) were conducted to identify the efficacy and safety of Doptelet. Avatrombopag effectively increased platelet levels to allow surgery with a decreased risk of bleeding complications. The trials also found that the medication is safe with only minor side effects: fever, abdominal pain, nausea, headache, fatigue, and peripheral edema. The current recommended treatment for these patients is platelet therapy, which is associated with infections, transfusion-related acute lung injury, and severe anaphylactic episodes. Doptelet is an effective alternative to platelet transfusions that may prove to have less serious adverse effects.

### **References:**

- FDA approves new drug for patients with chronic liver disease who have low blood platelets and are undergoing a medical procedure [news release]. Silver Spring, MD: May 21, 2018; FDA  
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