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Defitelio (*defibrotide*)

An overview of Defitelio and why it is authorised in the EU

What is Defitelio and what is it used for?

Defitelio is a medicine used to treat severe veno-occlusive disease (VOD) in patients undergoing haematopoietic (blood) stem cell transplantation. VOD is a condition in which the veins in the liver become blocked and stop the liver working properly. Defitelio is used in adults and in children from one month of age.

Defitelio contains the active substance defibrotide.

VOD is rare, and Defitelio was designated an 'orphan medicine' (a medicine used in rare diseases) on 29 July 2004. Further information on the orphan designation can be found here: ema.europa.eu/Find medicine/Human medicines/Rare disease designation.

How is Defitelio used?

Defitelio can only be obtained with a prescription and it must be prescribed and given by a doctor experienced in the management of complications of blood stem cell transplantation. It is given by infusion (drip) into a vein over 2 hours 4 times a day. The dose depends on the patient's bodyweight. Treatment should last for at least 3 weeks and continue until the patient no longer has symptoms. For more information about using Defitelio, see the package leaflet or contact your doctor or pharmacist.

How does Defitelio work?

VOD is usually a complication resulting from a treatment known as 'myeloablative chemotherapy' given before blood stem cell transplantation. Myeloablative chemotherapy is used to clear the patient's bone marrow of cells before receiving healthy stem cells. The medicines used for this treatment can damage the lining of the blood vessels in the liver, leading to the formation of clots and obstruction of the vessels seen in VOD.

The active substance in Defitelio, defibrotide, works by increasing the breakdown of clots in the blood. In addition, defibrotide may protect the cells that line blood vessels.

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What benefits of Defitelio have been shown in studies?

Severe VOD has a high mortality rate of 75% or higher. In one main study involving 102 patients with severe VOD following blood stem cell transplantation, Defitelio was compared with past records of patients who had received standard supportive care. Defitelio lowered the mortality rate to 62% at 100 days after transplantation, and 24% of patients had no symptoms of severe VOD after 100 days.

Benefits of Defitelio were also seen in data from a United States patient registry (information about patients collected in a standard way), where patients with severe VOD after blood stem cell transplantation who received Defitelio plus standard care had better outcomes than those given standard care alone, including a higher 100-day survival rate (39% versus 31%) and a higher proportion of patients whose VOD resolved (51% versus 29%).

What are the risks associated with Defitelio?

The most common side effects with Defitelio are hypotension (low blood pressure) and bleeding. For the full list of side effects of Defitelio, see the package leaflet.

Defitelio must not be used together with other medicines that break down blood clots. For the full list of restrictions, see the package leaflet.

Why is Defitelio authorised in the EU?

The European Medicines Agency decided that Defitelio's benefits are greater than its risks and it can be authorised for use in the EU. Defitelio had been shown to improve survival in patients with severe VOD. Although it was not possible to conduct a study directly comparing Defitelio with placebo (dummy treatment), the company had provided sufficient data to show that patients treated with the medicine had improved chances of survival. The side effects seen, such as bleeding, were considered manageable and it was not possible to determine with certainty whether they were caused by Defitelio.

Defitelio has been authorised under 'exceptional circumstances'. This is because it has not been possible to obtain complete information about Defitelio due to the rarity of the disease. Every year, the Agency will review any new information that becomes available and this overview will be updated as necessary.

What information is still awaited for Defitelio?

Since Defitelio has been authorised under exceptional circumstances, the company that markets the medicine is required to provide results of an ongoing study on safety of the medicine when used for prevention of VOD in adults and children undergoing hematopoietic stem cell transplantation. The company will also analyse data on transplant outcomes in VOD patients who have and have not been treated with Defitelio.

What measures are being taken to ensure the safe and effective use of Defitelio?

Recommendations and precautions to be followed by healthcare professionals and patients for the safe and effective use of Defitelio have been included in the summary of product characteristics and the package leaflet.

As for all medicines, data on the use of Defitelio are continuously monitored. Side effects reported with Defitelio are carefully evaluated and any necessary action taken to protect patients.

Other information about Defitelio

Defitelio received a marketing authorisation valid throughout the European Union on 18 October 2013.

Further information on Defitelio can be found on the Agency's website: ema.europa.eu/Find medicine/Human medicines/European public assessment reports.

This overview was last updated in 10-2019.