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Outcome of assessment on use of Siklos in the treatment of severe chronic anaemia in sickle cell syndrome

The European Medicines Agency has finalised its assessment of an application to extend the use of Siklos to include the treatment of severe chronic (long-term) anaemia (low red blood cell counts) in adults, adolescents and children older than two years of age suffering from sickle cell syndrome. Although EMA did not recommend this use, it agreed that relevant data from the study submitted with the application be included in the medicine's product information so that healthcare professionals have access to up-to-date data on the effects of Siklos in patients with sickle cell syndrome-related severe chronic anaemia.

What is Siklos and what is it used for?

Siklos is a medicine used to treat adults, adolescents and children over two years of age who have sickle cell syndrome, a genetic disease where the red blood cells become rigid and sticky, and change from being disc-shaped to being crescent-shaped (like a sickle). It is used to prevent recurrent, painful vaso-occlusive crises that happen when blood vessels become blocked by the abnormal red blood cells, restricting the flow of blood to an organ.

Siklos has been authorised in the EU since June 2007.

It contains the active substance hydroxycarbamide and is available as tablets.

Further information on Siklos's current uses can be found on the Agency's website: ema.europa.eu/en/medicines/human/EPAR/siklos

What change had the company applied for?

The company applied to extend the use of Siklos to the treatment of severe chronic anaemia in people with sickle cell syndrome. Siklos was to be used in patients with a haemoglobin level below 7 g/dL. Haemoglobin is the protein in red blood cells that carries oxygen around the body.

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How does Siklos work?

It is not well understood how Siklos works in sickle cell syndrome-related chronic anaemia. The active substance in Siklos, hydroxycarbamide, is thought to protect red blood cells from being broken down, increasing their lifespan, thereby increasing haemoglobin levels. Siklos has also shown to be associated with increases in the production of haemoglobin.

What did the company present to support its application?

To support its application, the company provided data from a study involving 149 adults and children with sickle cell syndrome-related severe chronic anaemia who received Siklos. Patients' haemoglobin levels were compared before and after 12 months of treatment with Siklos.

What were EMA's conclusions?

EMA's medicines committee (CHMP) noted that haemoglobin values were missing for a large part of the study participants, preventing an adequate assessment of the benefits and risks of Siklos in these patients. Haemoglobin measurements were available for only 41 out of 149 anaemic patients. In addition, not all patients met the criteria for severe chronic anaemia, and it is unclear if patients received blood transfusions that could have impacted on the haemoglobin measurements. The CHMP was also concerned as the study did not have a control arm where patients would receive placebo (dummy treatment) to provide a comparison.

Although Siklos will therefore not be authorised for sickle cell syndrome-related severe chronic anaemia, the prescribing information for Siklos will be updated to include relevant data, so that healthcare professionals have access to up-to-date data on the effects of Siklos in patients with this condition.

Does this outcome affect patients in clinical trials/ compassionate use programmes?

The company informed the Agency that there are no consequences for patients in clinical trials or in compassionate use programmes using Siklos.

If you are in a clinical trial or compassionate use programme and need more information about your treatment, speak with your clinical trial doctor.