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Summary report on authorisation dated 6 December 2024

Zolgensma® (active substance: onasemnogene abeparvovec)

Temporary authorisation in Switzerland: 28 June 2021

Solution for infusion for the treatment of spinal muscular atrophy (SMA) in infants and toddlers under the age of 2 years

About the medicinal product

Zolgensma contains the active substance onasemnogene abeparvovec and is a gene therapy medicine used to treat children with a rare, severe hereditary disease called spinal muscular atrophy (SMA).

SMA occurs when an important gene that is responsible for the production of a protein called survival motor neuron 1 (SMN1) is either absent or exhibits an anomaly. As a result of the lack of SMN1 proteins, nerve cells that are responsible for muscle control die off, causing muscle weakness and loss of the ability to move. When infused, Zolgensma delivers essential genetic information contained in the SMN1 gene, which the cells can use to produce functional SMN1 proteins.

The medicinal product is used to treat children with mutations in both copies of the SMN1 gene (bi-allelic mutations) and may only be given to patients under the age of 2 years.

Since spinal muscular atrophy is a rare and life-threatening disease, the medicine has been authorised as an orphan drug. The term orphan drug is used to refer to important medicines for rare diseases.

Mode of action

Zolgensma is a gene therapy medicine used to treat children with a specific genetic disease known as spinal muscular atrophy (SMA). This disease occurs because an important gene – SMN1 – is absent or has mutated. Zolgensma delivers a functional copy of this gene to the patient's cells so that they can produce the necessary SMN protein again. This helps maintain the nerve cells responsible for controlling muscle movement and counteracts progressive muscle weakness and loss of the ability to move.

Administration

Zolgensma is a prescription-only medicine.

Zolgensma is administered as a solution for infusion intravenously (into the veins) by medical professionals in specialised neuromuscular centres.

Dosage is determined individually on the basis of the patient's weight.

Patients are continuously monitored so that potential side effects can be detected at an early stage.

Efficacy

The efficacy of Zolgensma was investigated in study AVXS-101-CL-303. The study enrolled 22 patients with SMA Type 1 and 2 copies of the SMN2 gene.

Its primary endpoints were survival without permanent ventilation at 14 months of age and achievement of the motor developmental milestone "independent sitting for at least 30 seconds" at 18 months of age.

Of the 22 patients, 20 (90.9%) survived to an age of 14 months without permanent ventilation. A total of 14 patients (63.6%) were able to sit without assistance for at least 30 seconds.

Precautions, undesirable effects, & risks

Zolgensma must not be used in those who are hypersensitive to the active substance or any of the excipients.

Zolgensma can cause severe liver problems, including acute liver damage and liver failure. For this reason, liver parameters (ALT, AST, total bilirubin) should be regularly tested both before and after the infusion. The most common undesirable effects include elevated liver enzymes (24.2%), vomiting (9.1%), fever (5.1%), and elevated troponin I levels[1] (3.0%).

Very rare cases of thrombotic microangiopathy[2] have been reported since the global market launch of Zolgensma.

Patients should be in a stable general condition before they receive an infusion and not display any symptoms of infection.

All precautions, risks, and other possible undesirable effects are listed in the Information for patients (package leaflet) and the Information for healthcare professionals.

Why the medicinal product has been authorised

Spinal muscular atrophy (SMA) is currently incurable. Zolgensma is an alternative treatment option that aims to slow disease progression and improve quality of life.

Studies have shown that Zolgensma can significantly improve survival and motor abilities, particularly if patients are treated at an early stage.

[1] Elevated troponin I levels may be an indicator of heart muscle damage

[2] Thrombotic microangiopathy: Thrombotic microangiopathy is a rare but serious disease characterised by thrombocytopenia (low platelets), haemolytic anaemia (destruction of red blood cells), and acute kidney failure.

Severe side effects such as elevated liver enzymes and thrombocytopenia have been observed and have to be controlled by appropriate monitoring and treatment.

The medicinal product Zolgensma has been authorised temporarily in Switzerland (in accordance with Art. 9a TPA) since not all clinical trials were available or had been concluded at the time of authorisation. The temporary authorisation is contingent on the timely submission of the data requested by Swissmedic. Once these authorisation conditions have been met, the temporary authorisation can be converted into an authorisation without special conditions in the event of a positive benefit-risk assessment of the results.

Further information on the medicinal product

Information for healthcare professionals: Information for healthcare professionals Zolgensma®

Information for patients (package leaflet): Information for patients Zolgensma®

Healthcare professionals can answer any further questions.

The date of revision of this text corresponds to that of the SwissPAR. New information concerning the authorised medicinal product in question will not be incorporated into the Summary report on authorisation.

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