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Onpattro (*patisiran*)

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

What is Onpattro and what is it used for?

Onpattro is a medicine used to treat nerve damage caused by hereditary transthyretin (hATTR) amyloidosis, a disease in which abnormal proteins called amyloids build up in tissues around the body including around the nerves.

Onpattro is used in adult patients in the first two stages of the nerve damage (stage 1, when the patient is able to walk unaided, and stage 2, when the patient can still walk but needs help).

hATTR amyloidosis is rare, and Onpattro was designated an 'orphan medicine' (a medicine used in rare diseases) on 15 April 2011. Further information on the orphan designation can be found here: ema.europa.eu/Find medicine/Human medicines/Rare disease designation.

Onpattro contains the active substance patisiran.

How is Onpattro used?

Onpattro can only be obtained with a prescription and treatment should be started and supervised by a doctor experienced in the treatment of patients with amyloidosis.

The medicine is available as a solution for infusion (drip) into a vein. The recommended dose is 300 micrograms per kilogram body weight once every 3 weeks.

To reduce the risk of infusion-related reactions, patients should be given corticosteroid medicines, paracetamol and medicines known as H1 and H2 blockers before receiving Onpattro. Patients should also take vitamin A supplements during treatment with Onpattro.

Onpattro may be given at home by a healthcare professional if the patient has had at least 3 infusions given in hospital without problems. For more information about using Onpattro, see the package leaflet or contact your doctor or pharmacist.

How does Onpattro work?

In patients with hATTR amyloidosis, a protein called transthyretin which circulates in the blood is defective and breaks easily. The broken protein forms amyloid deposits in tissues and organs around the body, including around nerves, where it interferes with their normal functions.

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The active substance in Onpattro, patisiran, is a 'small interfering RNA' (siRNA), a very short piece of synthetic genetic material that has been designed to attach to and block the genetic material of the cell responsible for producing transthyretin. This reduces production of defective transthyretin, thereby reducing the formation of amyloids and relieving the symptoms of hATTR amyloidosis.

What benefits of Onpattro have been shown in studies?

In one main study involving 225 hATTR amyloidosis patients with stage 1 or 2 nerve damage, Onpattro was shown to be more effective than placebo (a dummy treatment) at slowing down the nerve damage caused by the disease.

The main measure of effectiveness was the change in the patients' nerve damage, as measured using a standard scale called 'mNIS+7', with scores ranging from 0 to 304 (a higher score indicates more severe nerve damage). After 18 months of treatment, the mNIS+7 score decreased on average by 6 points with Onpattro (from around 81 to around 75 points), indicating a slight improvement of the patients' condition. This compares with an increase on average by 28 points with placebo (from around 75 to around 101 points), indicating that nerve damage got worse in these patients.

What are the risks associated with Onpattro?

The most common side effects with Onpattro (which may affect more than 1 in 10 people) are peripheral oedema (swelling, especially of the ankles and feet) and infusion-related reactions including pain, nausea (feeling sick), headache, tiredness, dizziness, cough and breathing problems, reddening of the skin, rapid heartbeat, low or high blood pressure and swelling of the face.

For the full list of side effects and restrictions with Onpattro, see the package leaflet.

Why is Onpattro authorised in the EU?

Onpattro was shown to be effective at slowing down nerve damage in hATTR amyloidosis patients with stage 1 or stage 2 nerve damage; available data were not sufficient to assume a beneficial effect in stage 3 patients (those confined to a wheelchair). Regarding safety, the most serious side effects are infusion-related reactions and these can be managed with premedication and changes to infusion speed.

The European Medicines Agency therefore decided that Onpattro's benefits are greater than its risks and it can be authorised for use in the EU.

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

The company that markets Onpattro will provide educational materials for doctors and patients with information about how to give the medicine safely when at home and how to manage side effects.

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

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

Other information about Onpattro

Onpattro received a marketing authorisation valid throughout the EU on 27 August 2018.

Further information on Onpattro 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 08-2018.