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Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Ciclosporin for the treatment of moderate and severe closed traumatic brain injury

On 1 October 2010, orphan designation (EU/3/10/791) was granted by the European Commission to NeuroVive Pharmaceutical AB, Sweden, for ciclosporin for the treatment of moderate and severe closed traumatic brain injury.

What is closed traumatic brain injury?

Closed traumatic brain injury is brain damage caused by a head injury (such as a blow to the head in a traffic accident or a fall). 'Closed' means that the skull remains intact. The initial injury to the head and brain usually goes on to cause 'secondary' problems, most frequently due to inflammation and swelling of the brain tissue increasing the pressure within the skull. Traumatic brain injury is classified as mild, moderate or severe according to the patient's symptoms: patients with moderate injury are lethargic (lacking in energy) or stuporous (unaware of their surroundings), and those with severe injury are comatose (unconscious). People with moderate or severe traumatic brain injury need to be admitted to hospital for observation and examination, in case the condition gets worse.

Moderate and severe traumatic brain injuries are long-term debilitating and life threatening because they may lead to permanent disability and death.

What is the estimated number of patients affected by the condition?

At the time of designation, moderate and severe closed traumatic brain injury affected less than 4 people in 10,000 per year in the European Union (EU). This was equivalent to a total of fewer than 203,000 people per year*, which was considered to be below the threshold for orphan designation. This is based on the information provided by the sponsor and the knowledge of the Committee for Orphan Medicinal Products (COMP).

*Disclaimer: For the purpose of the designation, the number of patients affected by the condition is estimated and assessed on the basis of data from the European Union (EU 27), Norway, Iceland and Liechtenstein.
At the time of designation, this represented a population of 506,300,000 (Eurostat 2010).

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What treatments are available?

At the time of designation, various methods were used to reduce the pressure within the skull in patients with moderate or severe closed traumatic brain injury, including medicines such as mannitol (a diuretic) and surgery.

The sponsor has provided sufficient information to show that ciclosporin might be of significant benefit for patients with moderate or severe closed traumatic brain injury because this medicine is a new formulation of ciclosporin and early studies indicate that it might have a positive effect in protecting injured brain cells. This assumption will need to be confirmed at the time of marketing authorisation, in order to maintain the orphan status.

How is this medicine expected to work?

Ciclosporin is an immunosuppressant medicine (a medicine that reduces the activity of the immune system) that has been used since the early 1980s. This medicine will be available as a solution for injection and is expected to be able to reach the injured brain tissue because the 'blood-brain barrier' that separates the bloodstream from the brain is usually damaged in patients with moderate and severe brain injuries. Once ciclosporin has reached the nerve cells in the brain, it is expected to act within the cells to protect their energy production, therefore reducing the loss of brain cells.

What is the stage of development of this medicine?

The effects of ciclosporin have been evaluated in experimental models.

At the time of submission of the application for orphan designation, clinical trials with this formulation of ciclosporin in patients with moderate or severe closed traumatic brain injury had been planned.

At the time of submission, this formulation of ciclosporin was not authorised anywhere in the EU for the treatment of moderate and severe closed traumatic brain injury or designated as an orphan medicinal product elsewhere for this condition.

In accordance with Regulation (EC) No 141/2000 of 16 December 1999, the COMP adopted a positive opinion on 8 July 2010 recommending the granting of this designation.

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Opinions on orphan medicinal product designations are based on the following three criteria:

- the seriousness of the condition;
- the existence of alternative methods of diagnosis, prevention or treatment;
- either the rarity of the condition (affecting not more than 5 in 10,000 people in the EU) or insufficient returns on investment.

Designated orphan medicinal products are products that are still under investigation and are considered for orphan designation on the basis of potential activity. An orphan designation is not a marketing authorisation. As a consequence, demonstration of quality, safety and efficacy is necessary before a product can be granted a marketing authorisation.

For more information

Sponsor's contact details:

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For contact details of patients' organisations whose activities are targeted at rare diseases see:

- Orphanet, a database containing information on rare diseases which includes a directory of patients' organisations registered in Europe.
- European Organisation for Rare Diseases (EURORDIS), a non-governmental alliance of patient organisations and individuals active in the field of rare diseases.

Translations of the active ingredient and indication in all official EU languages[1], Norwegian and Icelandic

Language	Active ingredient	Indication
English	Ciclosporin	Treatment of moderate and severe closed traumatic brain injury
Bulgarian	Циклоспорин	Лечение на средно тежки и тежки и затворени травматични мозъчни наранявания
Czech	Ciclosporin	Léčba těžkého a středního uzavřeného mozkového traumatu
Danish	Ciclosporin	Behandling af moderat og svært, lukket hjernetraume
Dutch	C iclosporine	Behandeling van matig en ernstig niet-penetrerend traumatisch hersenletsel
Estonian	Tsüklosporiin	Raske ja keskmise raskusastmega kinnise traumaatilise ajukahjustuse ravi.
Finnish	Siklosporiini	Kohtalaisen ja vaikean suljetun traumaattisen aivovaurion hoito
French	Ciclosporine	Traitement des traumatismes crâniens fermés graves et modérés
German	Ciclosporin	Behandlung des mittelschweren und schweren geschlossenen Schädel-Hirn-Traumas
Greek	Κυκλοσπορίνη	Θεραπεία των μετρίων και σοβαρών κλειστών εγκεφαλικών τραυμάτων
Hungarian	Cyclosporin	Mérsékelten súlyos és súlyos, traumás koponyaüri sérülés kezelése
Italian	Ciclosporina	Trattamento del trauma cranio-encefalico chiuso moderato e grave
Latvian	Ciklosporīns	Smagas un viduvējas slēgtas galvas smadzeņu traumas ārstēšana
Lithuanian	Ciklosporinas	Stipraus ir vidutinio uždaro trauminio galvos smegenų pažeidimo gydymas
Maltese	Ciclosporin	Kura ta' feriti trawmatiċi magħluqa tal-moħħ moderati u severi
Polish	Cyklosporyna	Leczenie umiarkowanych i ciężkich, zamkniętych, pourazowych uszkodzeń mózgu
Portuguese	Ciclosporina	Tratamento do traumatismo craniano fechado moderado e grave
Romanian	Ciclosporină	Tratamentul leziunilor cerebrale traumatice închise, moderate şi severe
Slovak	Cyklosporín	Liečba mierneho a ťažkého uzavretého traumatického poškodenia mozgu
Slovenian	Ciklosporin	Zdravljenje zmernih in hudih zaprtih možganskih poškodb
Spanish	Ciclosporina	Tratamiento del traumatismo craneoencefálico moderado y grave no penetrante

[1] At the time of designation

Swedish	Ciklosporin	Behandling av lindrig och alvarlig stängd traumatisk hjärnskada
Norwegian	Ciklosporin	Behandling av moderat og alvorlig lukket traumatisk hjerneskade
Icelandic	Cíklósporín	Meðferð á meðalslæmum og alvarlegum lokuðum heilaáverka