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Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Progesterone for the treatment of moderate and severe traumatic brain injury

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Disclaimer Please note that revisions to the Public Summary of Opinion are purely administrative updates. Therefore, the scientific content of the document reflects the outcome of the Committee for Orphan Medicinal Products (COMP) at the time of designation and is not updated after first publication.	

Please note that this product was withdrawn from the Community Register of designated Orphan Medicinal Products in July 2014 on request of the Sponsor.

On 8 February 2013, orphan designation (EU/3/13/1101) was granted by the European Commission to BHR Pharma Belgium, Belgium, for progesterone for the treatment of moderate and severe traumatic brain injury.

What is moderate and severe traumatic brain injury?

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). 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 level of consciousness: 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.

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

At the time of designation, moderate and severe traumatic brain injury affected approximately 4 in 10,000 people in the European Union (EU). This was equivalent to a total of around 205,000 people*, and is below the ceiling for orphan designation, which is 5 people in 10,000. This is based on the information provided by the sponsor and the knowledge of the Committee for Orphan Medicinal Products (COMP).

What treatments are available?

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

The sponsor has provided sufficient information to show that progesterone might be of significant benefit for patients with moderate and severe traumatic brain injury on the basis of a study which showed improvement in survival in a sub-group of patients with severe brain injury who were given progesterone together with standard treatment. 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?

Progesterone is a steroid hormone found naturally in the body, which has a number of different functions. It is well known to have 'neuroprotective' effects, including by preventing inflammation, enhancing the survival of neurons (brain cells), controlling oedema (swelling) in the brain and promoting remyelinisation, the process of creating new myelin sheaths (the protective sheaths that insulate and improve the way the nerves function) around damaged nerves. By acting in these ways, progesterone is expected to improve the symptoms of moderate and severe traumatic brain injury.

What is the stage of development of this medicine?

The effects of progesterone have been evaluated in experimental models.

At the time of submission of the application for orphan designation, clinical trials with progesterone in patients with moderate and severe traumatic brain injury were ongoing.

At the time of submission, progesterone was not authorised anywhere in the EU for the treatment of moderate and severe traumatic brain injury. Orphan designation of progesterone had been granted in the United States of America for the treatment of moderate to severe closed-head traumatic brain injury.

In accordance with Regulation (EC) No 141/2000 of 16 December 1999, the COMP adopted a positive opinion on 9 January 2013 recommending the granting of this designation.

*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 512,200,000 (Eurostat 2013).

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	Progesterone	Treatment of moderate and severe traumatic brain injury
Bulgarian	Прогестерон	Лечение на средно тежка и тежка, травматична мозъчна увреда
Czech	Progesteron	Léčba středně závažného až závažného traumatického poranění mozku
Danish	Progesteron	Behandling af moderat til svær traumatisk hjerneskade
Dutch	Progesteron	Behandeling van matig tot ernstig traumatisch hersenletsel
Estonian	Progesteroon	Mõõduka ja raske traumaatilise ajukahjustuse ravi
Finnish	Progesteroni	Kohtalaisen ja vaikean traumaattisen aivovaurion hoito
French	Progestérone	Traitement de blessures traumatiques modérées et sévères du cerveau
German	Progesteron	Behandlung mittelschwerer und schwerer traumatischer Hirnverletzungen
Greek	Προγεστερόνη	Θεραπεία μέτριας και σοβαρής τραυματικής κάκωσης εγκεφάλου
Hungarian	Progeszteron	Középsúlyos vagy súlyos traumás agysérülések kezelése
Italian	Progesterone	Trattamento delle lesioni cerebrali traumatiche gravi e moderate
Latvian	Progesterons	Smadzeņu vidēji smagu un smagu traumatisku bojājumu ārstēšana
Lithuanian	Progesteronas	Vidutinio sunkumo ir sunkaus trauminio galvos smegenų pažeidimo gydymas
Maltese	Progesterone	Kura ta' feriti trawmatiċi tal-moħħ moderati u severi
Polish	Progesteron	Leczenie umiarkowanych i ciężkich urazów mózgu
Portuguese	Progesterona	Tratamento de danos cerebrais traumáticos moderados a graves
Romanian	Progesteron	Tratamentul leziunilor cerebrale traumatice moderate şi severe
Slovak	Progesterón	Liečba stredne závažného až závažného traumatického poškodenia mozgu
Slovenian	Progesteron	Zdravljenje zmernih in težkih travmatskih možganskih poškodb
Spanish	Progesterona	Tratamiento de lesiones traumáticas cerebrales moderadas y graves
Swedish	Progesteron	Behandling av måttlig och svår traumatisk hjärnskada
Norwegian	Progesteron	Behandling av moderat og alvorlig traumatisk hjerneskade
Icelandic	Prógesterón	Meðferð miðlungs- og alvarlegs heilaáverka á heila

[1] At the time of designation