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Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Rcombinant P-selectin glycoprotein immunoglobulin for the prevention of post transplantation graft dysfunction

On 22 May 2006 orphan designation (EU/3/06/376) was granted by the European Commission to RJM Consultancy Ltd, United Kingdom, for recombinant P-selectin glycoprotein immunoglobulin for the prevention of post transplantation graft dysfunction.

What is post transplantation graft dysfunction?

Organ transplant refers to the transfer of organs from one body to another. Once the organ is transplanted, it is called a graft. The transplant requires complex surgical procedures. Organs always suffer during this process, due to different causes. In some cases, the damage is such that the graft function becomes abnormal, which in case of kidney transplant results in a range of alterations that go from a delayed normalisation of laboratory parameters to the inability of the transplanted kidney to perform its normal function. This condition is called post transplantation graft dysfunction.

The dysfunction depends on the type of injury. For example, the disruption of blood supply may cause an immediate damage to the organ due to the lack of oxygen. In other cases, the patient has an immune reaction against the graft he received (in this case the immune system, the body's natural defence mechanism, attacks and aims to destroy the new organ/graft). In the long run, the dysfunction can cause graft failure and rejection. Post transplantation graft dysfunction is a long term debilitating and life-threatening condition.

What is the estimated number of patients at risk of developing the condition?

At the time of designation, the number of patients at risk of post transplantation graft dysfunction was estimated to be approximately 0.5 people in 10,000 in the European Union (EU)*. This is equivalent to a total of around 23,000 people, which is below the ceiling for orphan designation, which is 5 people in

*Disclaimer: For the purpose of the designation, the number of patients affected by the condition is estimated and assessed based on data from the European Union (EU 25), Norway, Iceland and Liechtenstein. This represents a population of 459,700,000 (Eurostat 2004).

10,000. This is based on the information provided by the sponsor and the knowledge of the Committee for Orphan Medicinal Products (COMP).

What methods of prevention are available?

There were several medicines that were authorised to prevent graft dysfunction, and organ rejection in the Community at the time of submission of the application for orphan drug designation. These medicines consisted of chemicals and antibodies (proteins of the immune system that can recognise and bind to specific structures) that inhibit the immune response against the graft. Satisfactory argumentation has been submitted by the sponsor to justify the assumption that recombinant P-selectin glycoprotein immunoglobulin might be of potential significant benefit because it might act differently from available treatments. The assumption will have to be confirmed at the time of marketing authorisation. This will be necessary to maintain the orphan status.

How is this medicine expected to work?

The situation where cells do not receive their normal supply of oxygen and nutrients is called ischemia. Organs that are extracted for transplantation suffer ischemia to a certain extent, due to the normal process of extraction and transport. In this situation cells react by placing certain proteins on the cell surface. These proteins can attract white blood cells and initiate an inflammatory reaction. This reaction may finally damage the graft. Recombinant P-selectin glycoprotein immunoglobulin is thought to act by blocking these proteins on the cell surface. This is expected to stop the inflammatory process that can damage the graft.

What is the stage of development of this medicine?

The effects of recombinant P-selectin glycoprotein immunoglobulin have been evaluated in experimental models.

At the time of submission of the application for orphan designation, clinical trials in patients with post transplantation graft dysfunction were ongoing.

Recombinant P-selectin glycoprotein immunoglobulin was not authorised anywhere worldwide for post transplantation graft dysfunction or designated as orphan medicinal product elsewhere for this condition, at the time of submission.

In accordance with Regulation (EC) No 141/2000 of 16 December 1999, the COMP adopted a positive opinion on 5 April 2006 recommending the granting of this designation.

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

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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 languages¹, Norwegian and Icelandic

Language	Active Ingredient	Indication
English	Recombinant P-selectin glycoprotein immunoglobulin	Prevention of post transplantation graft dysfunction
Czech	Rekombinantní P-selectin glykoproteinový imunoglobulin	Prevence postransplantační dysfunkce štěpu
Danish	Recombinant P-selectin glycoprotein immunoglobulin	Prævention af graft-dysfunktion efter transplantation
Dutch	Recombinant P-selectine glycoproteïne immunoglobuline	Preventie van implantaat dysfunctie na transplantatie
Estonian	Rekombinantne P-selektiini glükoproteiini immunoglobuliin	Transplantaadijärgse transplantaadi düsfuntsiooni preventsoon
Finnish	Rekombinantti P-selektiini-glykoproteiini- immunoglobuliini	Siirteen transplantaation jälkeisen toimintahäiriön ehkäisy
French	Glycoprotéine recombinante de type immunoglobuline liant la P-sélectine	Prévention de la dysfonction du greffon après transplantation
German	Rekombinantes P-selectin Glucoprotein Immunglobulin	Prävention einer Transplantatdysfunktion nach Transplantation
Greek	Ανασυνδυασμένο μόριο γλυκοπρωτεΐνης P-σελεκτίνης και ανοσοσφαιρίνης	Πρόληψη δυσλειτουργίας του μοσχεύματος μετά τη μεταμόσχευση
Hungarian	Rekombináns P-selectin glycoprotein immunoglobulin	A transzplantátum elégtelen működésének kivédése
Italian	Glicoproteina ricombinante di tipo immunoglobulina legante selectina P	Prevenzione della disfunzione dell'innesto dopo il trapianto
Latvian	Rekombinants P-selektīna glikoproteīna imūnglobulīns	Transplantāta disfunkcijas novēršanai pēc transplantācijas
Lithuanian	Rekombinantinis P-selektino glikoproteino imunoglobulinas	Transplantato disfunkcijos prevencija
Polish	Rekombinowana immunoglobulina przeciw glikoproteinowemu ligandowi selektywny P	Zapobieganie zaburzeniu czynności narządu przeszczepionego
Portuguese	Imunoglobulina glicoproteína P-selectina recombinante	Prevenção da disfunção do enxerto após transplante
Slovak	Rekombinovaný P-selektín glykoproteín imunoglobulín	Prevencia proti potransplantačnej disfunkcii štepů
Slovenian	Rekombinantni P-selektin glikoprotein imunoglobulin	Preprečevanje post-transplantacijske disfunkcije presadka
Spanish	Immunglobulina recombinante de P-selectina y glicoproteína	Prevención de la disfunción post-trasplante del injerto
Swedish	Rekombinant P-selektinglykoprotein-immunoglobulin	Förebyggande av graft-dysfunktion efter transplantation
Norwegian	Rekombinant P-selektin glykoprotein immunoglobulin	Forebygging av graft-dysfunksjon etter transplantasjon

¹ At the time of designation

Language	Active Ingredient	Indication
Icelandic	Raðbrigða P-selectín glýkóprótein ónæmisglóbúlín	Fyrirbyggjandi meðferð við starfstruflun í nýrnagræðlingi eftir nýrnaígræðslu