European Medicines Agency

EMEA/H/C/198

EUROPEAN PUBLIC ASSESSMENT REPORT (EPAR)

ZENAPAX

EPAR summary for the public

This document is a summary of the European Public Assessment Report (EPAR). It explains how the Committee for Medicinal Products for Human Use (CHMP) assessed the studies performed, to reach their recommendations on how to use the medicine.
If you need more information about your medical condition or your treatment, read the Package Leaflet (also part of the EPAR) or contact your doctor or pharmacist. If you want more information on the basis of the CHMP recommendations, read the Scientific Discussion (also part of the EPAR).

What is Zenapax?
Zenapax is a concentrate to be made up into a solution for infusion (drip into a vein). It contains the active substance daclizumab (5 mg/ml).

What is Zenapax used for?
Zenapax is used to prevent the body from rejecting a kidney soon after a transplant. It is used together with other immunosuppressive (anti-rejection) medicines including ciclosporin and corticosteroids. It is used in patients who do not have high levels of antibodies against 'foreign' cells from other people. These antibodies can develop following blood transfusion, pregnancy or previous organ transplantation.

How is Zenapax used?
Zenapax should only be prescribed and given by doctors who have experience in the use of immunosuppressive treatment following organ transplant. The recommended dose for adults and children is 1 mg per kilogram body weight, diluted in 50 ml sterile saline solution and given over 15 minutes. The first infusion is given in the 24 hours before transplantation. The subsequent doses should be given every 14 days for a total of five doses.

How does Zenapax work?
The active substance in Zenapax, daclizumab, is a monoclonal antibody. A monoclonal antibody is an antibody (a type of protein) that has been designed to recognise and bind to a specific structure (called an antigen) that is found on certain cells in the body. Daclizumab has been designed to bind to the receptor for interleukin-2 on the surface of white blood cells called T-lymphocytes. These cells are involved in recognising 'foreign' cells and rejecting transplanted organs. By binding to and blocking the receptor, daclizumab prevents interleukin-2 activating the T-lymphocytes, reducing the chance that the transplanted kidney will be rejected.

How has Zenapax been studied?
Zenapax has been studied in two main studies involving a total of 535 adults undergoing kidney transplant. Both studies compared the effects of adding Zenapax or placebo (a dummy treatment) to other immunosuppressive medicines. In the first study, the patients were receiving ciclosporin and prednisone (a corticosteroid), and in the second study, they were receiving ciclosporin, prednisone and

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azathioprine. The main measure of effectiveness was the proportion of patients who experienced rejection of the transplanted kidney in the first six months after the transplant.
A further study looked at rejection rates in 60 children aged between five and 18 years who were undergoing a kidney transplant. In this study, Zenapax was added to the children's existing immunosuppressive medicines.

What benefit has Zenapax shown during the studies?
Zenapax was more effective than placebo in reducing the rate of rejection when added to immunosuppressive therapy.
In the first study, 28 (22%) of the 126 adults adding Zenapax to ciclosporin and prednisone experienced rejection, compared with 47 (35%) of the 134 adding placebo.
In the second study, 39 (28%) of the 141 adults adding Zenapax to ciclosporin, prednisone and azathioprine experienced rejection of the kidney, compared with 63 (47%) of the 134 adding placebo.
In the study of children, five (8%) experienced rejection in the first six months after the transplant.

What is the risk associated with Zenapax?
In studies, side effects were seen at similar rates in patients taking Zenapax and those taking placebo, when given in combination with immunosuppressive medicines. The most common side effects (seen in more than 1 patient in 10) were insomnia (difficulty sleeping), tremor (shaking), headache, hypertension (high blood pressure), dyspnoea (difficulty breathing), constipation, diarrhoea, vomiting, nausea (feeling sick), dyspepsia (heartburn), musculoskeletal pain (pain in the muscles and joints), oedema (swelling), impaired healing and post-traumatic pain (pain after surgery). For the full list of side effects reported with Zenapax, see the Package Leaflet.
Zenapax should not be used in people who may be hypersensitive (allergic) to daclizumab or any of the other ingredients. Zenapax must not be used in women who are breast feeding.

Why has Zenapax been approved?
The Committee for Medicinal Products for Human Use (CHMP) decided that Zenapax's benefits are greater than its risks for the prophylaxis of acute organ rejection in *de novo* allogenic renal transplantation, used concomitantly with an immunosuppressive regimen, including ciclosporin and corticosteroids in patients who are not highly immunised. The Committee recommended that Zenapax be given marketing authorisation.

Other information about Zenapax:
The European Commission granted a marketing authorisation valid throughout the European Union for Zenapax to Roche Registration Limited on 26 February 1999. The marketing authorisation was renewed on 26 February 2004.

The full EPAR for Zenapax can be found here.

This summary was last updated in 10-2007.