Public Statement:

Extracorporeal photopheresis is covered for the treatment of cutaneous T-cell lymphoma and chronic graft-versus-host disease (GVHD) after a prior allogeneic stem cell transplant. It is also covered for cardiac transplant recipients (see ARB0154). This therapy is not covered for acute GVHD, autoimmune diseases, or any other disorder.

Medical Policy Statement:

Photopheresis is covered for the treatment of cutaneous T-cell lymphoma and chronic GVHD, as well as reduction of the risk of rejection for heart transplant patients (see ARB0154).

Use of photopheresis for any other indication is considered investigational and is not covered.

Background:

Extracorporeal photopheresis has been shown in prospective case studies to be effective in the treatment of T-cell lymphoma. Evidence suggests that it prolongs life and induces 50-75% response rates.

The use of photopheresis as a treatment of graft-versus-host disease (GVHD) after a prior allogeneic stem cell transplant is based on the fact that GVHD is an immunologically mediated disease. GVHD can be categorized into acute, occurring within the first 100 days after infusion of allogeneic cells, or chronic disease, which develops sometime after 100 days. Acute GVHD is commonly graded I-IV, ranging from mild disease characterized by a skin rash without involvement of the liver or gut, to grades III and IV, which are characterized by generalized erythroderma, elevated bilirubin levels, or diarrhea. Grade III acute GVHD is considered severe, while Grade IV
is considered threatening. Chronic GVHD typically presents with more diverse symptomatology resembling autoimmune diseases such as progressive systemic sclerosis, systemic lupus erythematosus, or rheumatoid arthritis. It may affect the mouth, eyes, respiratory tract, musculoskeletal system, peripheral nerves, as well as the skin, liver, or gut - the usual sites of acute GVHD.

An alternating regimen of cyclosporine and prednisone are commonly used to treat chronic GVHD. Other therapies include antithymocyte globulin, corticosteroid monotherapy, and cytotoxic immunosuppressive drugs such as procarbazine, cyclophosphamide, or azathioprine. Therefore, refractory disease is defined as chronic GVHD that fails to respond adequately to a trial of any of the above therapies.

There is no standard schedule for photopheresis therapy. However, most reported schedules initiate therapy with 1-3 days of photopheresis at 1-3 week intervals, followed by a tapering of therapy.

In 2006, the Ontario Health Technology Advisory Committee (OHTAC) published results of a systematic review of ECP for the treatment of refractory chronic GVHD. In summary, OHTAC reported that there is low quality evidence that ECP improves response rates and survival in patients with chronic GVHD who are unresponsive to other forms of therapy. Limitations in the literature related to ECP for the treatment of refractory GVHD mostly pertained to the quality, size, and heterogeneity in treatment regimens and diagnostic criteria of available clinical studies. The Committee did, however, recommend a 2-year duration field evaluation of ECP for chronic GVHD, using standardized inclusion criteria and definitions to measure disease outcomes including response rates, quality of life, and morbidity.

A retrospective case series published in 2007 reported results of ECP for steroid-resistant GVHD in pediatric (aged 6–18 years) patients who had undergone hematopoietic stem-cell transplantation to treat a variety of cancers (Massimo et al, 2007). Patients had acute GVHD (aGVHD, n=15, stages II-IV) or chronic GVHD (cGVHD, n=10, 7 deemed extensive) that did not respond to at least 7 days of methylprednisolone therapy. Patients received ECP on 2 consecutive days at weekly intervals for the first month, every 2 weeks during the second and third months, and then at monthly intervals for a further 3 months. ECP was progressively tapered and discontinued based on individual patient response. Response to ECP was assessed 3 months after ECP ended or after 6 months if the ECP protocol was prolonged. Among patients with aGVHD, a CR was observed in 7 of 7 (100%) with Grade II and 2 of 4 (50%) with Grade III illness, whereas none with Grade IV responded to ECP. In the group with cGVHD, 3 of 3 (100%) with limited disease had CR, compared to 1 of 7 (14%) with extensive disease who had a CR; 5 of 7 (71%) of patients with extensive cGVHD had no response to ECP. Adverse effects of ECP were generally mild in all cases.

References:


Extracorporeal photopheresis for treatment of graft versus host disease or autoimmune disease. 2001 Blue Cross Blue Shield Association Technology Evaluation Center Assessment.


the treatment of drug-resistant autoimmune bullous disease. Derm 1999; 198:140-144.


Extracorporeal photopheresis for treatment of graft versus host disease or autoimmune disease. 2001 Blue Cross Blue Shield Association Technology Evaluation Center Assessment.


**Application to Products**

This policy applies to ARBenefits. Consult ARBenefits Summary Plan Description (SPD) for additional information.

Last modified by: Date: