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EXTRACORPOREAL PHOTOCHEMOTHERAPY FOR ACUTE AND CHRONIC GVHD, A REPORT OF 75 PATIENTS TREATED IN A SINGLE INSTITUTION

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Acute GVHD and chronic GVHD remain the leading cause of morbidity and mortality of allogeneic stem cells transplantation. Immunosuppressive therapy is the common practice to combat GVHD, however it heavily impacts on post transplant rate of infection and is associated with secondary malignancies affecting both morbidity and mortality. Extracorporeal phototherapy (ECP) has been previously reported to be a useful modality treating patients with coetaneous T cells lymphoma, various autoimmune diseases and GVHD. Reported here is 7-years experience in a single institution of (ECP) for acute and chronic GVHD patients. Mononuclear cells were collected using Cobe 'Spectra version 7 manual operation for adults and version 6 for pediatric patients. One and half to 2 blood volumes were circulated through the cell separator with a product of approximately 5×10^9 mononuclear cells. When product hematocrit was less than 3%, volume was added to 300ml. and when the hematocrit was more than 3%, volume was added to 500 ml. 8 Methoxy psoralen (8MOP) was added to final concentration of 0.2ug/ml. The product was transferred to irradiation bag and exposed to 2 Joule /cm² of UVA (365nm) (Biogenetic Vilber Lourmat). Cells were then re transfused. The treatment protocol consisted of 2 consecutive ECP performed at bi weekly intervals until clinical improvement. 75 patients, 47 males and 28 females, age 1 to 64y (median 32 years), were treated. Patients underwent allogeneic bone marrow transplantation for the following indications. AML -24, ALL- 22, CML-11, Thalasemia 4, MDS-3, MM-1, NHL-3, T-cell Lymphoma-4. 26 were treated for acute GVHD and 49 for chronic GVHD. Diffuse GVHD of skin was diagnosed in 59, gastro-intestinal tract 16; joint involvement 12, and liver involvement 45 patients. Patients had from 4 to 104 ECP (median 23).

Results: 26 pts succumbed, 15 with acute GVHD and 11 with chronic GVHD. Disease relapse was the cause of death in 3 patients with acute GVHD. Overall response rate was 57/73 (78%). Response rate for chronic GVH was 43/48 90% and for acute GVH was 14/25 (56%). $P < 0.001$. Complete resolution of GVHD, partial response and no response were seen respectively in 6%, 72%, 12% for patients with chronic GVHD and 4%, 50% and 46% for patients with acute GVHD.

Conclusions: ECP is a useful modality of therapy and is most effective in patients with chronic GVHD. It is an effective modality for both liver and skin involvement and less effective for patients with scleroderma. It is suggested that this modality should be used in early management of these patients concomitantly with immune suppressive therapy in order to improve quality of life and reduce long-term side effects.