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IMPACT OF DONOR LYMPHOCYTE INFUSION ON OUTCOMES OF MYELOID NEOPLASMS POST ALLOGENEIC STEM CELL TRANSPLANTATION, SINGLE CENTER EXPERIENCE

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INTRODUCTION

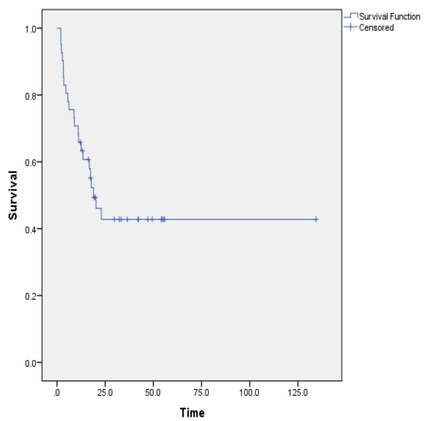
Disease relapse has been the main cause of treatment failure post hematopoietic stem cell transplantation (HSCT) for myeloid neoplasm, with a 2-year overall survival (OS) less than 20%. Donor lymphocyte infusion (DLI) is a kind of immunotherapy which can induce durable remission by enhancing the graft-versus-leukemia (GVL) effect. DLI can be a potential treatment option for patients with disease relapse post HSCT, with varying reports regarding efficacy and the cost of toxicities such as graft-versus-host disease (GVHD).

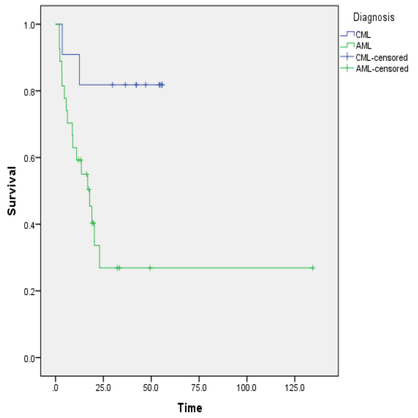
METHOD

We conducted a retrospective review of pediatric patients with myeloid neoplasms who underwent HSCT and received DLI at Children's Cancer Hospital Egypt, CCHE 57357 from January 2011 to October 2021

RESULTS

Forty-one patients underwent HSCT and received DLI at a median age of 10.3 years (range 2-18 years). Twenty-four patients had acute myeloid leukemia (AML), 11 patients had chronic myeloid leukemia (CML) and 6 patients had myelodysplastic syndrome(MDS). All patients received myeloablative conditioning and had HLA matched sibling donors. Indications for DLI included mixed donor chimerism (5 patients), rising MRD (18 patients), frank relapse (18 patients). All patients were off systemic immunosuppression at the time of DLI infusion. The median time from transplant to first DLI was 12 months. Eighteen patients received treatment before DLI infusion. Most of the patients received more than one infusion of DLI. Median cell dose was 1.7×10^8 CD3 cells/kg (range 0.5×10^8 - 4.22×10^8 CD3 cells/kg). Fourteen patients (34%) developed GVHD. Twenty-four patients relapsed post DLI (58.5%) (19 AML, 1 CML, 4 MDS). Twenty-two patients (53.6%) died (16 AML, 4 MDS, 2 CML); 3 of them died out of non-relapse mortality. Event free survival at 2 years was 37.3%_and OS rate at 2 years was 42.8%.





CONCLUSIONS

DLI appears to offer potential treatment options in myeloid patients who relapse or at risk of relapse post HSCT specially in a low-income country with limited resources and with accepted complications and survival rates.

REFERENCES

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