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## Ex vivo expansion of mesenchymal stem cells for management of limbal stem cell deficiency

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**Purpose:** An intervention case series demonstrating the use of mesenchymal stem cells ex vivo co-cultured with limbal tissue in the management of limbal stem cell deficiency.

**Setting/Venue:** Kasr ElAini Faculty of Medicine, Departments of Ophthalmology and Clinical Pathology, Cairo University, Cairo, Egypt.

**Methods:** Eight eyes of seven patients suffering from limbal stem cell deficiency were treated with mesenchymal stem cells derived from their own bone marrow. The mesenchymal stem cells had been co-cultured with allolimbal tissue and transplanted to the patient limbus after being carried on an amniotic membrane.

**Results:** The stem cell deficiency was improved initially in all patients. Recurrence of stem cell deficiency occurred by different degrees in three patients. The follow up period ranged from 3 to 22 months.

**Conclusion:** Mesenchymal stem cell transplantation may be helpful in management of limbal stem cell deficiency when sufficient limbal stem cells are not available.

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