

## Outcome of Bone Marrow Derived Stem Cell Therapy in the Management of Complete Spinal Cord Injury at Dhaka Medical College Hospital

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**Purpose:** Traumatic spinal cord injury (SCI) is a severe neurological disease which causes sensory loss, motor paralysis and autonomic difficulties which is usually treated with physiotherapy. Complete spinal cord injury with ASIA Grade A patients remains untreated and neglected in our country since long back. Here we describe an effective strategy for the treatment of complete spinal cord injury by autologous bone marrow derived mesenchymal stem cell therapy.

**Material and Method:** The study was conducted in the Neurosurgery Department, Dhaka Medical College Hospital, Dhaka Bangladesh from December 2015 to December 2017. Total 22 Patients with traumatic spinal cord injury (ASIA Grade-A) were included in this study. Total 60 ml of autologous bone marrow was aspirated and processed to prepare 6-7 ml of bone marrow aspirate concentrate (BMAC) which was transplanted at the site of cord injury. Bony alignment was done by decompression and stabilization. Post-surgical physiotherapy and regular follow up was given.

**Result:** Surgical outcome was assessed by ASIA Grading. Among 22 patients, 10 patients (45.45%) improved by one grade, 7 patients (31.82%) improved by two grade, 2 patients (9.09%) improved by three grade, 3 patients (13.64%) did not show any improvement of any grade as because their follow-up period was short. 19 patients (86.36%) noticed sensory and 16 patients (72.72%) noticed autonomic improvement by some extent.

**Conclusion:** Stem cell therapy is safe and effective. Steady and focused progress in stem cell research will open the door for many disable patients in the country like Bangladesh.

### Biography:

Dr. Sukriti Das, Associate Professor, Department of Neurosurgery, Dhaka Medical College passed MBBS in 1992 from Mymensingh Medical College, Bangladesh. He also completed FCPS (General Surgery), FRCS Ed and MS (Neurosurgery). Currently he works on bone marrow derived stem cell therapy in the management of complete spinal cord injury.