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At reproductive age, men have more stem cells

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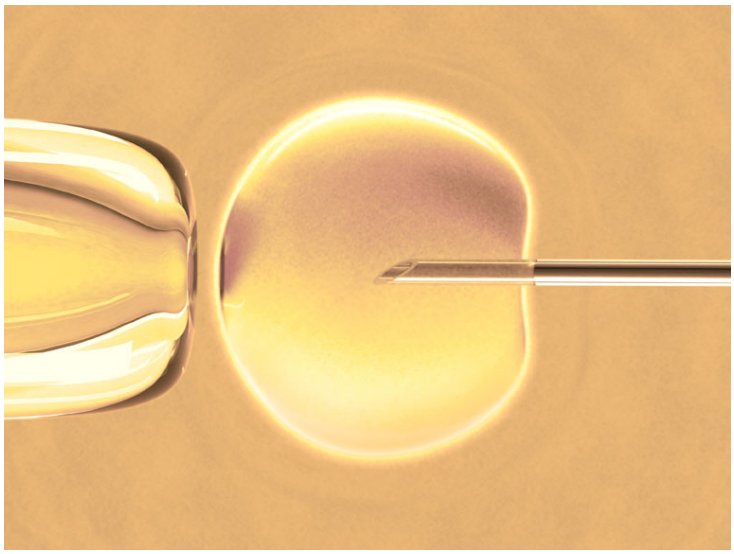
Men have more stem cells than women



Bangalore: Men have relatively more bone marrow stem cells than women of the same reproductive age, says a study done on patients with spinal injury. It also showed that the decline in the quantity of the stem cells was sharp after the age of 40 in both the genders.

The study done by Chennai-based Nichi-In Centre for Regenerative Medicine (NCRM), an Indo-Japan joint venture institute, jointly with KG hospital, Coimbatore, and Omega Hospital, Mangalore, in India, was published online in the Journal Bone Marrow Research.

Spinal cord injury following road traffic accident or fall from heights make the victim confined to the wheel chair due to the inability to the move the body parts below the level of injury. Recently, there were evidences proving the safety and efficacy of bone marrow stem cells, offering a hope to these patients. However, Dr Abraham, the author of the paper, said the quantity of bone marrow stem cells, especially the CD34+ cells in quantity in total, and their concentration per ml of bone marrow in spinal injury victims have not been reported to this detail.

"Our study has revealed that women of reproductive age group have a lower quantity of stem cells than their male counterparts, though the total quantity and concentration of stem cells are more in women in the 0-20 age group. After the age of 60, though the mononuclear cell total quantity in women is reaching the same quantity as in men, the CD34+ stem cells are still lesser in women," he said. "In general, more men are victims of such accidents leading to spinal cord injury. In our study too, men to women ratio was 4:1."

Dr JKBC Parthiban, president, Neuro Spine Surgeons Association of India, and a co-author of the paper, said, "The bone marrow stem cells offer a great hope to spinal injury victims and we have to thoroughly research on them to bring out their best potential for treating patients and studies like this are steps towards a better understanding for translation."