

LifeCell – Daily News Update

June 18 , 2009

Key Industry News:

Publication	ExpressBuzz
Headline	<u>City Hospital performs complex cancer surgery</u>
Gist of the article	<p>HYDERABAD: Vishwanath Raju of Bhimavaram at Warangal worked in a chemical factory and was the sole breadwinner for his family, which included two children. Upon complaints of a severe back pain that would not subside despite medication and painkillers, it was revealed that the 48-year-old was suffering from a terminal stage of bone cancer (Myeloma). The heartbroken patient was referred by the ESI at Sanathnagar to a private hospital in the city.</p> <p>At the hospital, a radical method of stem cell transplantation was carried out, which has seen Raju recover successfully without major complications. At the announcement made at Yashoda Cancer Institute today, doctors said that this was the first time in India that the stem cells were harvested using a new chemical agent, called the GMCSF.</p> <p>The procedure, said Oncologist at the Institute, Dr A V S Suresh, “reduced the recovery time to less than two weeks.” The transplantation, explained Dr Suresh, “involved extracting stem cells from the patient’s bone marrow with the chemical agent, which would then disperse the stem cells in the blood.” The stem cell-enriched blood was then extracted out of the patient’s body and stored for transplantation later.</p> <p>“The unique aspect of the procedure was that the patient himself performed the role of the donor, though the two week period when the patient was left literally ‘without blood’ was crucial and required extensive monitoring,” he added.</p> <p>Stem cells are incidentally considered as a life blood for cancer patients, since they can quickly adapt and repair damaged tissue in the body. Conventionally extracted from the umbilical cords of new born babies, stem cell harvesting had run into initial troubles, since the procedure for extraction was controversial. “The new method, however ensures that there is no scarcity for donors, as the patient can provide the raw materials for stem cell harvesting,” he added. The patient, at present is reported to be recovering within the normal range and “does not have any evidence of the</p>

	disease," the doctor signed off.
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Publication	Inthenews.co.uk
Headline	<u>Fallopian tubes offer stem cell hope</u>
Gist of the article	<p>Scientists have revealed a potential new source of crucial stem cells – fallopian tubes.</p> <p>The tissue is usually discarded after surgical procedures but a new study states that in fact they may provide an abundant supply of mesenchymal stem cells which have the potential of becoming a variety of cell types.</p> <p>It has previously been shown that mesenchymal stem cells obtained from umbilical cords, dental pulp and adipose tissue, which are all biological discards, are able to differentiate into muscle, fat, bone and cartilage cell lineages</p> <p>The author's of the new report published in the Journal of Translational Medicine claim therefore that the search for sources to obtain multipotent stem cells from discarded tissues and without ethical problems is "of great interest".</p> <p>In their research, the authors set out to isolate and assess the differentiation potential of mesenchymal stem cells from discarded human fallopian tubes.</p> <p>They found the cells could be easily isolated and expanded and can differentiated into different cell lines.</p> <p>Tatiana Jazedje, from the University of Sao Paulo, comments: "In addition to providing an additional potential source for regenerative medicine, these findings might contribute to reproductive science as a whole.</p> <p>"Moreover, the use of human tissue fragments that are usually discarded in surgical procedures does not pose ethical problems."</p>

Publication	Forbes.com
Headline	<u>Clues to Muscular Dystrophy Seen in Womb</u>
Gist of the article	<p>English scientists may have found a way to detect muscular dystrophy in the womb or shortly after birth, giving doctors more time to treat the disease before symptoms develop.</p> <p>Focusing on key proteins, University of Birmingham researchers detected disrupted stem-cell function and delays of skeletal-muscle formation in the embryos of specially bred mice. The scientists found a close relationship between the severity of abnormalities and the severity of later symptoms seen in two forms of the disease, Duchenne muscular dystrophy (DMD) and</p>

the milder limb-girdle muscular dystrophy.

Their findings were reported in the July/August issue of the journal *Disease Models & Mechanisms*.

Although more work needs to be done, researchers were confident that their findings had the potential to improve life for children with muscular dystrophy, a group of incurable, hereditary diseases that progressively weaken muscles and other body systems.

Most patients with DMD, the most common and severe form, are wheelchair-bound by age 11 and die between their teens and early 30s. Untreated children die earlier, usually the result of heart and respiratory muscle failure.

Most patients are diagnosed between the ages of 3 and 5, when the disease is already well-established.

The hope is that an earlier diagnosis -- even before birth -- may lead to significantly longer and better life, the study said.