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Latest trends in stem cells therapy

Thursday, October 08, 2009 08:00 IST /Pharmabiz

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Regenerative therapy using adult stem cells have come of age, so to speak, as the incidence of an average person undergoing stem cell therapy has peaked in the past few years. Much media attention has focused on the recently approved clinical trial using embryonic stem for treating Parkinson's Disease. However, the major gains in terms of therapy have been in the use of adult stem cells derived from bone marrow and cord blood.

The advantages of adult stem cells in terms of the easily available sources and none of the ethical challenges clearly outweigh their use compared to embryonic stem cells. Several clinical trials have been carried out for treating various disease including myocardial infarct, critical limb ischemia and spinal cord injury. In India, International Stemcell Services Ltd. has launched their stem cell therapy operations in the country and is the first company to have

started ICMR-approved trials for spinal cord injury using autologous stem cells. ISSL has been in the forefront from the beginning and is incidentally the oldest stem cell company in India offering stem cell banking and therapy options to patients in a variety of disease contexts.

Results of the trials have been published in peer-reviewed medical journals and are accepted by noted physicians as treatment alternatives for patients who have no other options available for them. ISSL has completed the country's first and the world's largest trial on Beurger's disease (Critical Limb Ischemia) and have effectively established safety and efficacy in the patient population. ISSL has also completed clinical trials for liver cirrhosis, spinal cord injury and myocardial infarction to name a few.

As such, stem cell therapy must be a service-based industry, where knowledge-based companies offer therapy options in niche areas, so that such therapies are affordable as well as beneficial in the long run. The use of stem cells for therapy must be based on sound scientific background to prevent their misuse and avoid misleading claims. However, the lure of growing stem cell therapy-based business opportunities in India has attracted multinational companies to exert their influence on the nature of therapy practice.

One trend is to develop a stem cell product - specifically using mesenchymal stem cells, thus emulating the pharma industry. However, the claims that these cells can treat a wide variety of disease remain to be validated. Proper follow ups need to be in place and the patients should be properly educated. In many cases, people are misled by so-called "counsellors", who lead them to dubious centers, who claim to treat them for enormous exchange of money. Companies resort to treatment options under the guise of stem cells. Patients remain clueless about the nature of these cells and are left high and dry after the therapy is completed.

Currently, there are very few Indian companies that are active in stem cell therapy research. This may be due to our west-centric attitude regarding developing technologies, which leads to a paucity of inbred talent. In India, the need is to develop technologies that can provide stem cell treatment options to the Indian population at a cost that is affordable. Unfortunately, many of the therapies are offered at exorbitant prices. Moreover, many of the claims for therapy are anecdotal and lack published data. People forums must be in place to educate people so that proper education will result in directing them to the right destination and true benefits of the therapy can be documented.

Government regulations are in place but unfortunately not enforced, which

gives rise to spurious claims by dubious persons, claiming their share in the stem cell therapy wagon and misleading patients towards therapy procedures which may not be appropriate. Stringent rules are needed and practitioners of stem cell therapies must adhere to them so that follow-ups can be documented and validated.

Lastly, although many corporate houses are seeing this as business proposition and are entering into the stem cell therapy domain, there is still a strong need to regulate these therapies so that there is a common standard maintained and maximum benefit can be given to deserving patients. Indian corporate houses must practice in cultivating a strong research background, so that companies can cut down the costs, as they can fall back on in-house R&D. Proper documentation and trials must be in place so that responsibility will solely rest on them to ensure proper therapy procedures to deserving patients.