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News PTI feed

# Stem cell patches may help fix injured hearts

PTI  
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Berlin, Nov 7 (PTI) Scientists have used a combination of cells to make grafts of heart tissue and used them to fix failing hearts in guinea pigs.

The advance may lead to heart muscle grafts that could help heal the organ in human patients with heart failure, the researchers said.

Researchers are currently testing the procedure in pigs and are working towards performing a human trial, said Thomas Eschenhagen, a professor at the University Medical Centre Hamburg-Eppendorf - UKE in Germany.

Heart damage that accompanies heart failure often leads to a loss of muscle tissue, which is essentially irreversible, because the tissue cannot regenerate itself, researchers said.

They used a combination of two types of cells that were made from human stem cells: heart muscle cells and cells called endothelial cells, which line the interior surface of blood vessels.

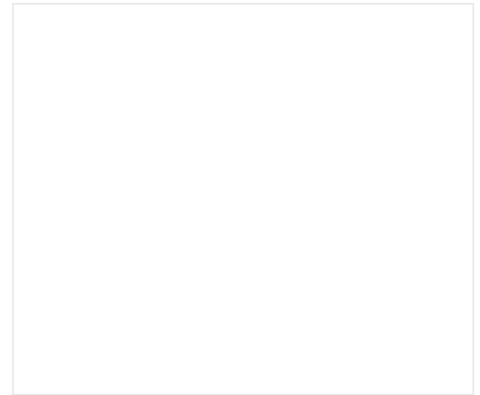
The researchers engineered strips of heart muscle tissue using these two cell types, Live Science reported.

They then sutured these heart muscle tissue grafts into the hearts of four guinea pigs in which heart injuries had been artificially induced.

The researchers found that over the 28 days that followed the implantation procedure, the heart muscle grafts not only integrated with the animals injured hearts, but also formed new heart muscle.

The guinea pig hearts ability to pump blood improved by 31 per cent compared with their ability to pump blood prior to the implantation, researchers said.

The study was published in the journal Science Translational Medicine. PTI SAR SAR



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