

STEM CELL THERAPY IN END-STAGE LIVER DISEASE AND LIVER FAILURE

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Liver cells have a tremendous capacity to multiply and regenerate the liver after any injury. However, this regenerative capacity of liver cells may be overwhelmed in acute liver failure and exhausted in cirrhosis with end stage liver disease. Currently, liver transplantation is the only definitive treatment for these conditions of liver. However, due to the shortage of donor organs many patients are dying while on waitlist for liver transplantation. As a result, it has become important to find an alternative strategy to keep these patients alive until their own livers regenerate or donor organs become available. Regenerative medicine and stem cell transplantation can help these patients. Adult stem cells and induced pluripotent stem cells showed good results when transplanted in experimental animals. Stem cells engineered from patients' own tissue proved to be safe, as well as non-immunogenic in clinical trials. Present review will discuss the current state of stem cell therapy, available stem cells and their application in different liver diseases.

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