

Stem cell therapy in acute myocardial infarction – quo vadis?

Terapia cu celule stem in infarctul miocardic acut – quo vadis?

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Finding the best therapeutic strategy in acute myocardial infarction (AMI) remains one of the foremost challenge of modern cardiology. The existing treatments do not address the vital necessity - that is the repair/replacement of injured cardiomyocytes, thus being incapable to block or reverse the pathological process which in time alters the structure and function of the whole heart.

One of the hottest advances in this regard is stem cell (SC) therapy; the rationale behind this experimental approach is to improve cardiac function by supplying a potential source of undamaged cells. Based on encouraging results achieved in animal studies, therapeutic efficacy of SC transplant has been investigated in clinical settings. Since 2001 - when the first successful autologous bone marrow stem cells transplantation has been performed in a 46-year-old patient with AMI, the field has evolved and expanded greatly: different SCs types have been used, cardiac SCs have been discovered, conflicting results have been reported, scientific papers have been under investigation, strategies to enhance the SCs regenerative potential have been applied and/or suggested, position papers and recommendations have been published.

All the above mentioned topics will be further debated, and the current state of knowledge in the field will be revealed in the forthcoming presentation.

Keywords: acute myocardial infarction, stem cells, cardiac regeneration

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