

Cellular therapy: A promising tool in the future of colorectal surgery.

Mohammed Mohammed El-Said

Abstract

Cellular therapy may be the solution of challenging problems in colorectal surgery such as impaired healing leading to anastomotic leakage and metastatic colorectal cancer (CRC). This review aimed to illustrate the role of cellular therapy in promotion of wound healing and management of metastatic CRC. An organized literature search for the role of cellular therapy in promotion of wound healing and management of metastatic CRC was conducted. Electronic databases including PubMed/Medline, Scopus, and Embase were queried for the search process. Two types of cellular therapy have been recognized, the mesenchymal stem cells (MSCs) and bone marrow-mononuclear cells (BM-MNCs) therapy. These cells have been shown to accelerate and promote healing of various tissue injuries in animal and human studies. In addition, experimental studies have reported that MSCs may help suppress the progression of colon cancer in rat models. This article reviews the possible mechanisms of action and clinical utility of MSCs and BM-MNCs in promotion of healing and suppression of tumor growth in light of the published literature. Cellular therapy has a potentially important role in colorectal surgery, particularly in the promotion of wound healing and management of metastatic CRC. Future directions of cellular therapy in colorectal surgery were explored which may help stimulate future studies on the role of cellular therapy in colorectal surgery.

mmelsaidshahab@hotmail.com