

Is menstrual blood a possible sustainable source of stem cells for regenerative medicine?

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Introduction: The discoveries of the late 20th century in molecular, cellular and biotechnological biology have made it possible to separate and cultivate cells from various tissues and organs. In recent years, the information obtained about stem cells, which have plastic capacities in cultivation, differentiation and survival in vitro, attract the attention of medical practitioners due to the possibility of treating a series of pathologies, currently difficult to cure.

Aim of the study: Evaluation of the latest research progresses in menstrual blood-derived stem cells (MenSC) and their application potential. Clinical indications of the use of MenSCs for various regenerative medicine utilization.

Materials and methods: This study is a review of the literature, based on the synthesis of clinical studies published in the period between 2007-2022, 21 scientific sources were researched. This article includes publications identified through Google Search Engines, PubMed Databases, etc. The information has been systematized, highlighting the most important aspects of the detection and use of stem cells derived from menstrual blood (MenSC).

Results: Menstrual blood secretion has been identified as a valuable source of stem cells (Haining Lv 2018), which are called menstrual blood-derived stem cells (MenSC). Compared to stem cells from bone marrow and adipose tissues, MenSCs originate from body secretions and obtaining them is non-invasive to the body, easy to collect, and there are no ethical concerns. There is therefore a growing interest in the functions of MenSCs and their potential applications in regenerative medicine.

Conclusions: Menstrual blood appears to be a continuous source of stem cells that is easily collected by non-invasive methods and without causing discomfort to the donor. Menstrual blood collecting and processing protocols need to be evaluated and refined and adapted to the conditions of the Laboratory of Tissue Engineering and Cells Culture.

Keywords: Menstrual blood, Regenerative medicine, Stem cells derived from menstrual blood, Stem cell therapy.

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