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The use of novel therapeutic cord blood stem cells exosomes in wound healing

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Chronic wounds and ulcers such as diabetic wounds (DW) and Pyoderma gangrenosum (PG) are two chronic clinical conditions that are infectious and non-infectious. DW is ubiquitous and PG is rare; however, in both states, treatment is a considerable challenge in respect to the response, outcome and financial for the health care system. In both conditions, inflammation is the primary and final reason for their progress and resistance to treatment. Exosomes are small, secreted vesicles that are produced by most cells. On the other hand, CBSCs have different potentials in recovering the damages on the cells, even permanent ones. In many studies, the CBSC derived exosomes are found to improve positively to reduce inflammation and repair the cells in cancer, liver, heart and lung diseases. This study investigated the effect of CBSCs derived exosomes on fibroblasts (skin cells) after inducing physical damage by either ultra-violet (UV) light exposure or scratching the skin. Our results showed that the injured cells repaired significantly, and their problematic condition cured very well. We planned to extend our project to assess the impact of these exosomes on diabetic wounds and PG.

Biography

Mojgan Najafzadeh, she was a qualified medical doctor with a speciality in internal medicine, graduated in 1998. Her personal interest is in cytogenetic and cancer. Her background of being a specialist in General Medicine provided me with a relatively good theoretical knowledge which helped me a lot in the field of research. This theoretical knowledge has grown in the last 10 years, with more focus on what I need to know as a researcher in genetics and toxicology with the interest in cancer. She has started to work in the division of biomedical sciences at the University of Bradford in 2004 as a Visiting researcher

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