INTRODUCTION

Skin burns are hard to treat, since they lead to an impairment of the immune system and other organs. Tissue damaged by burns triggers a cascade of events and produces both local effects and general responses in the whole body. A recent therapeutic alternative to treat burns is the use of mesenchymal stromal cells (MSC). MSCs are good candidates to regenerative therapy since these cells differentiate in many cell types besides possessing immunomodulatory properties (Figure 01).

RESULTS

From the 60th day after the thermal injury (Figure 03 A-H), an improvement in the healing process was observed in MSC-ID group (92.25 ± 2.92; n=4) in comparison to the PSB-ID (72.50 ± 1.87 n=6) p= 0.003 (Figure 03 G).

Evaluating the systemic immune response by analyzing the percentages of TCD4⁺ (Figure 04) and TCD8⁺ (Figure 05) on animals’ spleen, we found that 7, 15 and 30 days post-burn (PB) MSC-ID group had a lower percentage of both cell types.

CONCLUSION

These preliminary results showed the efficiency of ID administration of MSCs in deep burns, improving wound healing and modulating immune cells as well.