

Thesis Title	The Effectiveness of Peripheral Blood Stem Cell Therapy on Crow's Feet Wrinkles
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ABSTRACT

Peripheral blood stem cell therapy (PBSC) has long been known as an effective treatment in various medical conditions. The effectiveness of peripheral blood stem cell therapy on crow's feet wrinkles is an application that is being explored in this thesis. The study is an open labeled study aiming to evaluate the efficacy and safety of PBSC in the treatment of crow's feet wrinkles.

In a 7 wk, 25 healthy volunteers, 21 females and 4 males were recruited. All subjects gave their written consent prior to participate in the study. Rao-Goldman 5 point visual scoring scale and VisioScan[®] VC 98 were used for evaluating crow's feet wrinkles at wk0, wk2, wk4, and wk6 of the study. On day 5th, PBSCs were harvested from 20 ml of the blood samples and subsequently injected in the lateral periorbital areas. The peripheral blood stem cell mobilization was done by Filgrastim (human granulocyte colony stimulating factor (Hu-G-CSF)), administration for 4 consecutive days.

The improvement in crow's feet wrinkles were demonstrated at wk2 and more improvement were observed at wk4 and wk6. Statistical differences ($p < 0.001$) were shown by repeated measure ANOVA. The side effects were mild and included mild pain, redness and skin irritation at the sites of injection.

This study clearly demonstrated the effectiveness of PBSC in the treatment of crow's feet wrinkles. It is recommended that further study should be conducted in order to compare the effectiveness of this therapy with PRP and study the long term effect by following up the subjects at least two years.

Keywords: Peripheral Blood Stem Cell/Crow's Feet Wrinkles/Filgrastim (human Granulocyte Colony-stimulating Factor [Hu-G-CSF])