OBJECTIVE: G-CSF is a lymphohematopoietic cytokine. Non-lymphohematopoietic cells including endothelial cells, oligodendrocytes, certain tumor cells, and placental trophoblast cells can also express G-CSF receptors. In the female reproductive tract, G-CSF is synthesized under the regulatory influence of estrogen in the uterus. Fertility declines in G-CSF-deficient mice. Few data exist about G-CSF use in IVF patients with RIF or thin endometrium and recurrent miscarriages with good results. The goal of this study is the use of G-CSF in egg donation patients with RIF.

DESIGN: It was a prospective, therapeutic, self-controlled clinical trial, preliminary case-series.

MATERIALS AND METHODS: G-CSF was given to 15 patients with 3 or more unsuccessful egg donation treatments (pregnancy test: negative) in their next cycle of egg donation. G-CSF was given by intrauterine (IU) route of on five days before embryo-transfer; G-CSF (Granulokine, Filgrastim 30 1fl 30 mu 1ml) was given via an IU insemination catheter after cleansing the cervix. In all cycles 2 five day blastocysts were transferred. Pregnancy was defined as the presence of fetal cardiac activity.

RESULTS: The mean age of the patients was 46 yrs (28-55 years). Previous egg-donation attempts were 3.5 (min:3-max:5). Positive hCG test were in 11 patients (65%) but only 6 (40%) patients had an ongoing pregnancy. The pregnancy rates (pr) were 40%. The endometrial thickness the day of IU infusion was 6.3 mm, and on the day of embryo-transfer was 8.2 mm. The only side effects were minor uterine cramps.

CONCLUSION: Our preliminary results show that G-CSF is a promising and safe agent to increase the PRs in egg donation patients with RIF. The study is ongoing.