

**Program Adı**

TIBBİ BİYOLOJİ ve GENETİK; Yüksek Lisans - 2016

**Tezin Adı**

EFFECT OF PATERNAL AGE ON REPRODUCTIVE OUTCOME IN OOCYTE DONATION PROGRAM

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**ABSTRACT**

The effect of paternal age on reproductive function is still remain controversial for several reasons. Paternal age has also shown to be associated with increased risk of genetic diseases such as, DNA mutations along with chromosomal aneuploidies. In thi study, we examined the effect of paternal age on possible genetic (chromosomal) abnormalities between non-oocyte donors and oocyte donors.

We studied voluntered 30 non-oocyte donors ( $40.9 \pm 4.7$ ) and 17 ( $36.6 \pm 2.3$ ) oocyte donors. ICSI has been carried on both oocyte groups with male partners' average age of respectively  $39.3 \pm 2.4$  and  $43.8 \pm 4.5$ . PGD was used for analyzing the aneplidy of five chromosomes (13, 18, 21, X and Y) by Fluorescence in situ hybridization (FISH). In total, 166 embryos from oocyte donors and 246 embryos from non-oocyte donors have been analyzed by PGD-FISH.

51% of abnormal embryos from 246 non-oocyte donors and 40% abnormal embryos from 166 oocyte donors were detected. Most frequent abnormalities included 13.6% trizomy 13, 12% monosomy 18, 10.6%

monosomy 21 and continues with other chromosomal abnormalities such as monosomy 13 (6%), trisomy 21 (4.5%) and trisomy 18 (4.5%) for oocyte donors. Moreover, for non-oocyte donors 9.6% monosomy 18, 8% trisomy 13, 7.2% monosomy 21 were observed.

This study suggests abnormal chromosomal abnormality development is not associated with paternal age between oocyte donors and non-oocyte donors (P: 0.255). Thus, in our study paternal age does not play a significant role in abnormal embryo development.

**Keywords:** Oosit Donasyonu, IVF, ART technology