

Topic: Preimplantation Genetic Screening

Title: COMPREHENSIVE CHROMOSOMAL SCREENING REDUCES THE NUMBER OF EMBRYO TRANSFERS AND MISCARRIAGES BUT DOES NOT AFFECT ONGOING PREGNANCY RATES PER STARTED CYCLES

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Preimplantation genetic screening is often criticized that its utilization might lead to discarding viable embryos due to false diagnosis. Only non-selection studies would be able to properly address this question and to date only one study has been published. Here we show data how a complete ban of PGS affect clinical data of patients with advanced maternal age.

Data were collected from 93 patients aged 40 and above (average age of 42,56) after PGS ban (since July of 2015) and from 177 cycles where PGS was applied (average age of 42,43) in a previous time period of two and a half year (from January of 2013 to July of 2015). Only cycles where there was at least one fertilized egg were analysed.

As expected a significantly lower proportion of cycles resulted in embryo transfer (ET) in the PGS group (13,56% (24/177) vs. 54,84% (51/93); $p=0,0001$). No difference was found in clinical pregnancy rates in either calculated on per ET or per cycles started basis (41,67% (10/24) and 5,65% (10/177) in PGS group vs. 23,53% (12/51) and 12,90% (12/93) in non-PGS group; $p=0,05$). A significantly higher proportion of clinical pregnancies ended up with miscarriage in the non-PGS group (20,00% (2/10) in PGS group vs. 66,67% (8/12) in non-PGS group; $p=0,05$) resulting the same ongoing pregnancy rate per cycles started in both groups (4,51% (8/177) in PGS group vs. 4,30% (4/93) in non-PGS group; $p=0,05$).

Based on our data, transferring every available embryo for patients aged 40 and above does not result in higher ongoing pregnancy rates compare to when PGS is applied. It seems that about 40% of ETs was unnecessary that resulted in 5 extra miscarriages and an induced abortion due to trisomy 21 compare to PGS cycles in less than a 100 consecutive cycles.