



Is Gender Selection Sexist?

Various international professional organizations, but amongst them also the *American College of Obstetricians and Gynecologists (ACOG)*, have declared all forms of gender selection as devaluatory to women and sexist. We do not necessarily agree with this position and, therefore, decided to investigate the issue scientifically in a fair and balanced way.

Any anti-female bias, should, of course, result in the preferred selection of male offspring. We, therefore, decided to retroactively review all gender selection cases, performed at CHR over the last 2 years and to determine whether the selection was for female or male. The findings were partially as expected, and partially a surprise. Amongst Caucasian and Hispanic couples there was actually a strong preference for female selection. Amongst Chinese

and other, mostly Middle Eastern, Asian or Indian couples the preference was, indeed, towards male offspring.

The lesson from all of this: While relatively new immigrants may still maintain some of their cultural biases, the option of *gender selection does not discriminate* against females in a culturally integrated population. Indeed, when given the choice in such populations, the bias may be against male selection.

What we unfortunately could not formally address in the study is that in almost all couples we see for gender selection (even in ethnic minorities), the driving force behind the request is usually the female. *Time for ACOG, and others to reconsider!* A paper, describing these findings is in press in the medical journal *Human Reproduction*.



Chinese Patients Experience Lower IVF Pregnancy Rates

A number of reports in the recent literature suggested that IVF pregnancy rates in Chinese women are lower than in Caucasian patients. When we, at CHR, in 2006, as part of our ongoing quality assurance process, retroactively investigated whether this had also been our experience, we were rather surprised that our own results were confirmatory of these reports in the literature.

Neither we, nor any of the investigators who had reported on this discrepancy, could, however, explain why Chinese women showed inferior IVF results. We, therefore, initiated a study of young egg donors. Since CHR has quite a large egg donation program, we have historical donor data on a good number of egg donors from various ethnicities. We retrospectively reviewed these data and found quite surprising results, which, indeed, can explain why Chinese patients in general do so much poorer in IVF.

“Chinese egg donors showed significantly higher baseline FSH levels than their respective normal age-specific cutoffs.”

Egg donors are, of course, usually young (under age 34) and of excellent reproductive and general health. They are screened in identical fashion, independent of their ethnic backgrounds and one of the criteria for acceptance as an egg donor is, of course, normal ovarian function.

Like the rest of the world, we, however, until recently defined normal ovarian function based on baseline FSH levels of < 10mIU/ml. We only recently introduced the concept of age-specific baseline FSH levels. Egg donors, therefore, historically had not been screened in that fashion.

When we now, retrospectively, looked at age-specific FSH levels in our Caucasian and Chinese egg donors, we found that Chinese egg donors showed significantly higher baseline FSH levels, and significantly more often showed levels above their respective normal age-specific cut offs. Consequently, it is not surprising that Chinese egg donors also showed more cycle cancellations and produced fewer eggs. *In short, Chinese women experience a much higher prevalence of suspected POA.* Indeed, the study suggests an approximately 30-fold increase of risk for POA in young Chinese women in comparison to Caucasians.

This is, of course, a very important finding because, once POA is suspected, we now know that a switch in ovarian stimulation to ovarian-age-specific stimulation greatly improves pregnancy rates (*Gleicher et al., Fertil Steril, 2006*). A correct diagnosis, of course, also allows us to start patients on DHEA supplementation, which further improves their pregnancy chances. A manuscript describing these finding has been submitted for publication.



Fall Grandrounds Event Schedule

September 11, 2007

“The Male Biological Clock”

Speaker: Harry Fisch, MD

Location: Tony’s Di Napoli

147 W 43rd Street, New York, New York

October 9, 2007

“How Many Is Too Many?”

Speaker: Mark Evans, MD

Location: Indochine Restaurant

430 Lafayette Street, New York, New York

November 13, 2007

Title and Speaker to be announced

Location: Sammy’s Roumanian Steakhouse

157 Chrystie Street, New York, New York

For the fall season, CHR for the first time, in addition to the traditional Grandrounds schedule, will offer as new series of lectures by CHR staff members. The idea for this new lecture series arose after CHR’s June Grandrounds, which represented the first event outside of Manhattan. Since it attracted a large number of new faces, CHR decided to test during the fall season whether smaller events, within specific regions, outside of Manhattan, would be attractive to the local Ob/Gyn community. In contrast to the traditional Grandrounds, and because we do not want these events to be considered competitive, the speakers of this lecture series will be exclusively senior CHR staff members and the topics will only be selected for their universal interest within reproductive endocrinology. As with Grandrounds, participants will, however, receive CME credits for their attendance. “The Aging Ovary” will be the topic for all three events below.

September 25, 2007

Speaker: David Barad, MD, MS

Location: The River Club

11 Burd Street, Nyack, NY

October 23, 2007

Speaker: Norbert Gleicher, MD

Location: Bevanda Ristorante

570 Middle Neck Road

Great Neck, NY

November 27, 2007

Speaker: Norbert Gleicher, MD

Location: Thomas Beisel

25 Lafayette Avenue

Fort Greene, Brooklyn, New York

Ovarian Age

Determining the number early

Amongst many different ongoing research projects, the one we currently are pursuing most aggressively, is the improvement in the ability to diagnose *Premature Ovarian Aging (POA)*. We feel that the ability to diagnose POA early is not only of crucial importance for infertility patients, but also has considerable applications in the general population.

At a time when women increasingly defer childbearing, it seems crucial to be able to offer young women a reliable assessment of their “ovarian age.” Our goal

is to develop an age-specific method of ovarian function assessment, which will permit the average, young female, at time when she has her annual PAP smear taken, to have a simple blood test, which will tell her how age-appropriate



her ovarian function really is. Since approximately 10% of women suffer from POA, affected women will then have the chance to reconsider their reproductive planning.

POA testing also seems of particular importance for certain ethnicities. As we previously reported, our research on young egg donors suggests that young Chinese women demonstrate a significantly higher prevalence of POA than Caucasian women.

Finally, the timely diagnosis is, of course, especially important for infertile patients who, only too often, go undiagnosed and/or with a false diagnosis of so-called *unexplained infertility*.

Honors Received



CHR was honored for its research, when Andrea Weghofer, M.D., Ph.D. won the “Best of Best Award”, out of 220 presentations, at the *Annual Meeting of the Austrian and German Society for Obstetrics and Gynecology* in Munich, Germany June 7-9, 2007, for the paper “*Are women with premature ovarian aging at increased risk for chromosomal abnormal embryos?*”

New Standards for Treatment



In 2006, we for the first time started in a systemic way substituting women above age 40 with DHEA. Not everybody got it, but we recommended it to those women who in a previous cycle (often at other IVF centers) had produced only very small oocyte numbers and, therefore, often had been refused further IVF treatments with use of their own eggs.

As a consequence 43% of women above age 40 (up to age 46+)

received in our program DHEA supplementation during 2006. In a study submitted to the ASRM, we compared our 2006 IVF pregnancy rate in this patient population to the preceding 3 years. *Our 2006 rate was, of course, as many by now know quite spectacular: 23.5% of women in this age group conceived per IVF cycle, many after having previously been told to go into egg donation.* The difference in comparison to the preceding 3 years was statistically highly significant. Cumulatively, over one third of women, who had come to CHR with a prior recommendation elsewhere to proceed into egg donation, were discharged pregnant after one, or more cycles.

In view of these rather spectacular results we have in 2007 slightly expanded the indications for DHEA supplementation and now recommend it for all women above age 40 and also use it more frequently in younger women with significant POA.

DHEA NEWS

Worldwide Use Spreads

Our data accumulation on the utilization of DHEA is continuous. As we previously announced, based on our 2006 IVF data, we have now started to recommend DHEA pretreatment prior to IVF for all women above age 40.

We are also looking forward for first reports on the utilization from other fertility centers around the world. We are hearing from colleagues in many countries that they have started active DHEA supplementation of their patients with diminished ovarian function.

The practice seems to have gained especially strong footholds in Japan, Israel and Australia. DHEA data from outside of CHR should, therefore, become available in the near future.

More Boys after DHEA Supplementation?

Readers of CHR NEWS will already know that we have observed the birth of more male offspring than statistically expected after DHEA supplementation. In an abstract submitted to the ASRM, we now have attempted to dissect our data in a way that would allow us to determine how DHEA may cause such an effect.

In analyzing our data, we concluded that the DHEA effect, in some way, has to favor the implantation of male embryos over females. The conclusion that any DHEA effect on gender selection had to occur at implantation was based on the observation that prior to implantation (i.e., at the laboratory stage of embryo development, prior to embryo transfer) the sex ratio was still 50/50. We were able to determine this fact from our preimplantation genetics (PGD) data. Any effect, therefore, had to occur after transfer (i.e., at, or after, implantation).

That implantation processes may affect gender has recently also been suggested by another New York IVF group, which reported an increase in male offspring after blastocyst stage embryo transfer (i.e., day 5/6 vs. day 3). Later transfer, of course, also represents a different implantation milieu of the uterus.

The conclusion, therefore, is that if larger delivery numbers continue to suggest that DHEA treatment results in more male offspring, then we will have to figure out why DHEA impacts the implantation of male and female embryos differently. Should this be, indeed, the case, we may be able to develop a non-invasive gender selection technique.

But, - then there is, of course, also still the possibility that larger numbers will reestablish the equilibrium between boys and girls in our outcome data. We will keep you posted!



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26 YEARS LEADING INFERTILITY CARE

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