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Saturday, June 11, 2016
17:00 - 17:30  Fertility 101: Screening, the biological clock and when to refer
Fertility 101

Adele Miles
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What will I talk about?

Menstrual Cycle, Screening, Biological clock, Fertility Tips & When to refer.
Menstrual Cycle

- Endometrium sheds (sheds)
- Endometrium thickens
- Thickness of endometrium (uterine lining)
- Ovary: follicle releases egg then collapses
- Gonadotrophin hormone levels (LH & FSH)
- Ovarian hormone levels (oestrogen & progesterone)

FSH
E2
LH
P4
Menstrual Cycle
Screening WOMAN

- Clinical history
- Previous pregnancies/children/TOP
- Length of trying to conceive/prior contraception
- Cycle length/ovulation
- Periods – length/regular/irregular/heavy/painful
- Previous gynaecological surgeries/STI’s/smear history
- Previous illnesses/current meds
- Family fertility history/early menopause/genetic condition
Screening WOMAN

- Lifestyle
  - ETOH/Drugs
  - BMI/exercise
  - Smoking/Caffeine
- Biological clock
- Folic acid + Iodine or Elevit
- Immunity to chicken pox/rubella
Screening MAN

- BMI/exercise/testosterone supplements
- Smoking/ETOH/spa pools
- previous illnesses or groin surgery’s/injuries/meds
Biological Clock
Age HER

- The chance of pregnancy falls after the age of 35 and virtually disappears by the age of 45
- Advancing age increases risk of miscarriage
- Genetic abnormalities increase like Down syndrome
- About 10% of women experience menopause 5 years earlier than average – around the age of 45 instead of 50. About 1% 10 years earlier. AMH test may give prior warning about the possibility of early menopause.
The Age Factor

As you can see by the graph below, by age 35 a woman's chances of conceiving per month is decreased by half. The downward slope continues until by age 45 the natural fertility rate per month is approximately 1%.
Egg Quantity

Ovary - Follicle Atresia/Aging

Birth

Puberty

Mid 30's

55

Egg Quantity

$7 \times 10^6$

$1 \times 10^6$

$300K$

$25K$
AMH : Anti-Mullerian Hormone

AMH testing to help predict:

- Ovarian reserve
- Approximate age of the onset of menopause
- Likely response to ovarian stimulation for IVF
- AMH produced by granulosa cells
- AMH level declines with age as the number of eggs fall
- At menopause the AMH level is very low.
AMH

- **Green zone**: Above the 25th centile for younger, fertile women. Very likely normal ovarian reserve - age is the best predictor of your future fertility. 80% chance of 6 or more eggs in IVF.
- **Orange zone**: Between the 25th and 10th centiles for younger, fertile women. Some women in this range will have reduced ovarian reserve. 50% chance of 6 or more eggs in IVF.
- **Red zone**: Below the 10th centile for younger, fertile women. Very likely reduced ovarian reserve. 20% chance of 6 or more eggs in IVF.
Age HIM

• Men don't have an equivalent to menopause although the number of sperm made each day and their quality do fall with a man's age.

• Pregnancy from older men do show a higher incidence of some types of abnormalities among children – such as schizophrenia and autism.
Fertility Tips...
Get Ready, Get Set...

• Conception is very much about chance, and some people are just luckier than others.

• Timing is everything and the right time will be different for everyone.

• Knowing when ovulation occurs and consequently the best time for conception.

• Age single most important factor
Having fun making babies...

- 85% of couples conception will occur without difficulty. Normal biological chance & time are all that are required.

- Ovulation is a singular event in time. Fortunately sperm usually has the capacity to hang around for a while. Intercourse after ovulation very rarely results in success.
Cervical mucous

When the mucous changes from a sticky white substance to something increasingly like egg white at the pre-ovulatory day. Mucous detection is easy and cheap and vastly superior to temperature chart recording.
LH Kits

- Urine test detect the LH rise that begins to occur some 36 hours before ovulation
- If menstrual cycle is irregular?
- Basal body temperature rises after ovulation
When and how?

- Intercourse on every second day through the likely time of ovulation is all that should be necessary.
- Sperm are like vegetables, they are best used fresh! Saving up to provide an attack of nuclear proportions is not a helpful plan. Old sperm function much less than fresh and you want quality rather than quantity.
- Any sex position
- Lubricant: many commonly used lubricants kill sperm, there is now a lubricant made especially for use around ovulation which sperm are happy to live in.
Referral
Start your pathway to a family today

With over 28 years experience and 17,000 babies born so far - we can help you take this very important step towards having a baby.

Genetic Screening
Genetic Carrier Screening is now available at Fertility Associates
We have 20 fertility clinics across the country...
Refer when

• No pregnancy and biological clock indicates status in RED or ORANGE region

Or

• Any abnormal results on investigation
Referral

Early referral if

- Extreme anxiety about fertility
- Women aged 35 years or older
- Irregular cycles or anovulation
- Severe sperm factor
- Previous abdominal/pelvic/urogenital surgery
- Previous STD
- Two or more consecutive miscarriages
- Abnormal pelvic or genital exam (woman or man)
- Family history of menopause between 40-45 years or earlier
- Genetic conditions

Immediate referral before starting cancer treatment (sperm, eggs, embryos or ovarian/testicular tissue can be stored prior to cancer treatment)
Fertility Treatment – Who Uses It?

• 1 in 5 couples experience Infertility
• Tubal Factor
• Endometriosis
• Polycystic Ovary Syndrome
• Male Factor Infertility
• Unexplained Infertility
• Advancing Maternal Age
• Heterosexual Couples
• Single Women
• Same Sex Couples
• Cancer Patients
• Women who face removal of their ovaries
• Couples who know they carry genetic problems
Waitlist for treatment

- The wait to treatment varies across the country
- Generally **12–18 months**, you can check this when you make your referral to your local clinic.
- **Patients can access private fertility treatment whilst on the public waiting list**
Case Study CC

Female 27 & Male 27
Irregular periods, anovulation due to underweight BMI 18 & exercise
4 x CC cycles
Pregnant on 4th cycle
Case Study Letrozole

Female 30 & Male 31
Irregular periods, anovulation due to PCOS
1 x Let cycles
Pregnant on 1st cycle
Case Study IUI

Female 33 & Male 36
6 years trying, unexplained.
CC X 4 (1 miscarriage)
IUI x 2 (1\textsuperscript{st} stopped as over response)
Now pregnant with IUI
Case Study IUI + IVF

Female 28 & Male 31
PCOS + Male out of country often for work
IUI x 3 (fresh/frozen sperm)
IVF
Embryo replacement = Baby girl
12 B FZ
Case Study MOH ICSI

Female 37 & Male 42
5 years infertility, regular cycles/pelvis, reduced sperm quality
Enrolled for public treatment
1 MOH ICSI – 2 TER NP
2 MOH ICSI – 1 ER, (2 B FZ) – Delivered baby boy
Cast Study – Same Sex Couple

Female 27 & Female 38
Chosen clinic donor sperm- egg sharing/ICSI
Both had replacements
1 x baby boy
Case Study IVF + TER

Female 42 & Male 43
Trying for 6 months
AMH = 0, best chance DO
Matched with a clinic Donor 32 (not met)
IVF
1 fresh ER & 2 B FZ
Pregnant & delivered baby Girl
Case Study ICSI + SSR

Female 34 & Male 43
Trying 9 months > Severe oligospermia
Hx bilateral orchidopexy age 4, AMH 8
ICSI cycle – emergency SSR – D3 replacement – Baby boy
ICSI 2\textsuperscript{nd} cycle – planned SSR + OPU – D3 replacement – Baby girl
Any questions...

“What’s the time?”
Time to make it happen

0800 10 28 28  fertilityassociates.co.nz  FERTILITY associates