GYNAECOLOGICAL ISSUES FOR PATIENTS WITH HAEMOPHILIA, VWD AND OTHER RARE BLEEDING DISORDERS

Transition to Adulthood, Contraception and Fertility Issues

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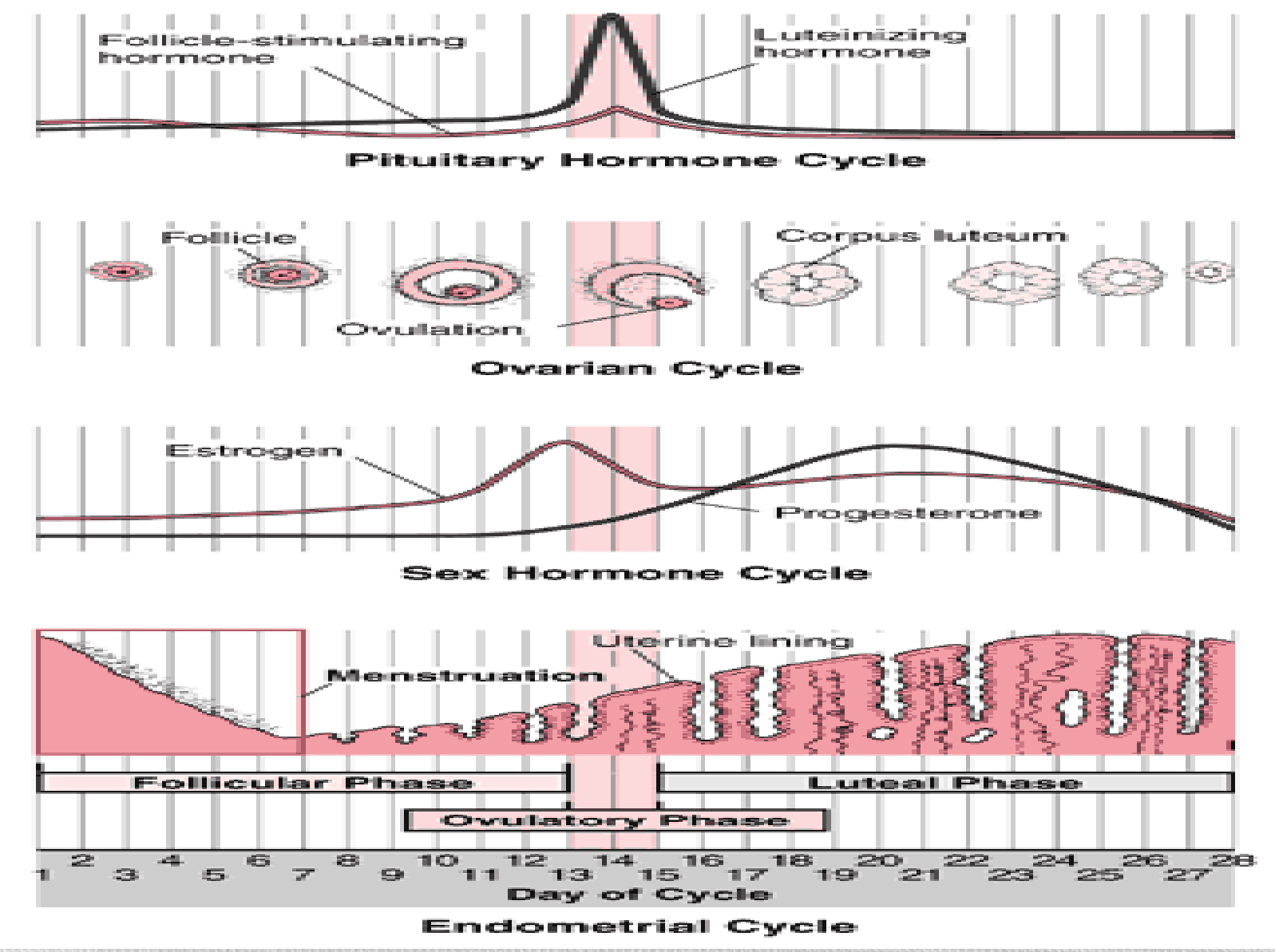
Role of Adolescent Gynaecologist

- Smooth transition from childhood to adulthood and attain full reproductive potential
- Follow through puberty
- Promote safety
- Gynaecology and fertility on a background of chronic illness

Adolescent Gynaecologist

- Promote normal menstrual function
- Treat gynaecological issues including heavy periods
- Discuss sexual function and promote safe sex
- Contraception
- Consider fertility options with safety the priority

Physiology of the Menstrual Cycle



Bleeding Disorders – influence on transition through puberty

- Usually very little impact on progression of puberty. May be point of first presentation.
- Irregular cycles – both short and long cycles irrespective of bleeding disorder status
- Degree of heavy menstrual bleeding will depend on levels of clotting factors or functional levels. Can be mild, moderate or severe
- Associated pain when menses are heavy
- Ovulation pain and haemorrhagic ovarian cysts common

Symptoms

- May be a bleeding tendency rather than severe bleeding disorder
- Depends on level of clotting factors but even with good levels may still be at risk of intense bleeding
- Bleeding for more than 8 days with frequent changes of tampons/pads and associated clotting and flooding
- Associated Fe deficiency and anaemia
- Rare platelet disorders often more difficult to control.

Menorrhagia – Heavy periods

- Very common in adolescence
- Often associated with frequent periods (every 2-3 weeks)
- Tranexamic acid to reduce the menstrual flow
- Can also use OCP to reduce flow and decrease frequency of menses
- Mirena (Levonorgestrel IUS) very good 2nd line management
- Desmopressin in FVIII deficiency (not IX)

Dysmenorrhoea – painful periods

- Panadol Osteo
- Cannot use Non steroidal Anti Inflammatory Drugs (NSAIDs) although occasionally COX 2 anti inflammatories can be used
- Heat packs and stronger analgesia
- Oral Contraceptive Pill (back to back packets to reduce frequency of menses and prevent ovulatory issues)
- Mirena IUS

OCP and Mirena

- Can use as many packets of OCP back to back as we can. Usually 3mths (school term) and often longer. Use lowest effective dose. Costs vary as not many on PBS and side effects differ from patient to patient.
- Only 5 day break between active tablets to reduce the bleeding days
- OCP will also reduce ovulation issues and haemorrhagic ovarian cysts as well
- Mirena can be inserted under general anaesthetic and used on its own or in conjunction with the OCP

Oligomenorrhoea/Secondary amenorrhoea

- Related to achieving 17% body fat to attain menarche and continue regular cycles so nutrition very important
- Strongly correlates with weight and percentage body fat
- Can also occur if significant increased weight as well
- Can occur with coincident medical issues (eg eating disorders, PCOS)

Endometriosis

- Benign inflammatory condition with endometrial implants outside the uterus.
- Associated with heavy bleeding patterns
- Not known if increased incidence in women with bleeding disorders but thought to be at possible increased risk
- Mirena a good management for both endometriosis and bleeding disorder (can use 2 if required)

- Again, management of menorrhagia and dysmenorrhoea important form an early age
- If surgical management of endometriosis required, important for gynaecological surgeons to be aware of any bleeding disorder

Sexual adaptation

- Important to discuss that first intercourse may be associated with hymenal tears that may bleed briskly
- Discuss with the young person not to have first intercourse somewhere remote
- Seek help or have your management plan in place

Contraception

- Use the combined oral contraceptive pill (OCP) unless significant side effects (headaches, acne, nausea and vomiting)
- Implanon – often irregular bleeding pattern but good contraception. Not my first choice for a bleeding disorder as poor menstrual management
- Mirena – least amount of bleeding but will need management plan for insertion. Tranexamic acid may be enough but availability of recombinant clotting factors desirable. Risk of expulsion with heavy bleeding
- Barrier methods (also good to prevent STIs) and rhythm methods

Cervical Cancer Vaccines (Gardisil)

- Suitable to prevent HPV infection and cervical abnormalities
- Ok to do this with bleeding disorder background (may need management at time of injection)
- Course of 3 injections
- Still need CST (previously known as Pap smear) as only prevents the major 4 HPV species – oncogenic species are 16 and 18
- New screening (CST) became test of choice in Dec 2017 and is performed every 5 years from 25 yrs of age. Tests for HPV rather than cellular changes in cervical cells.

Plan Pregnancy

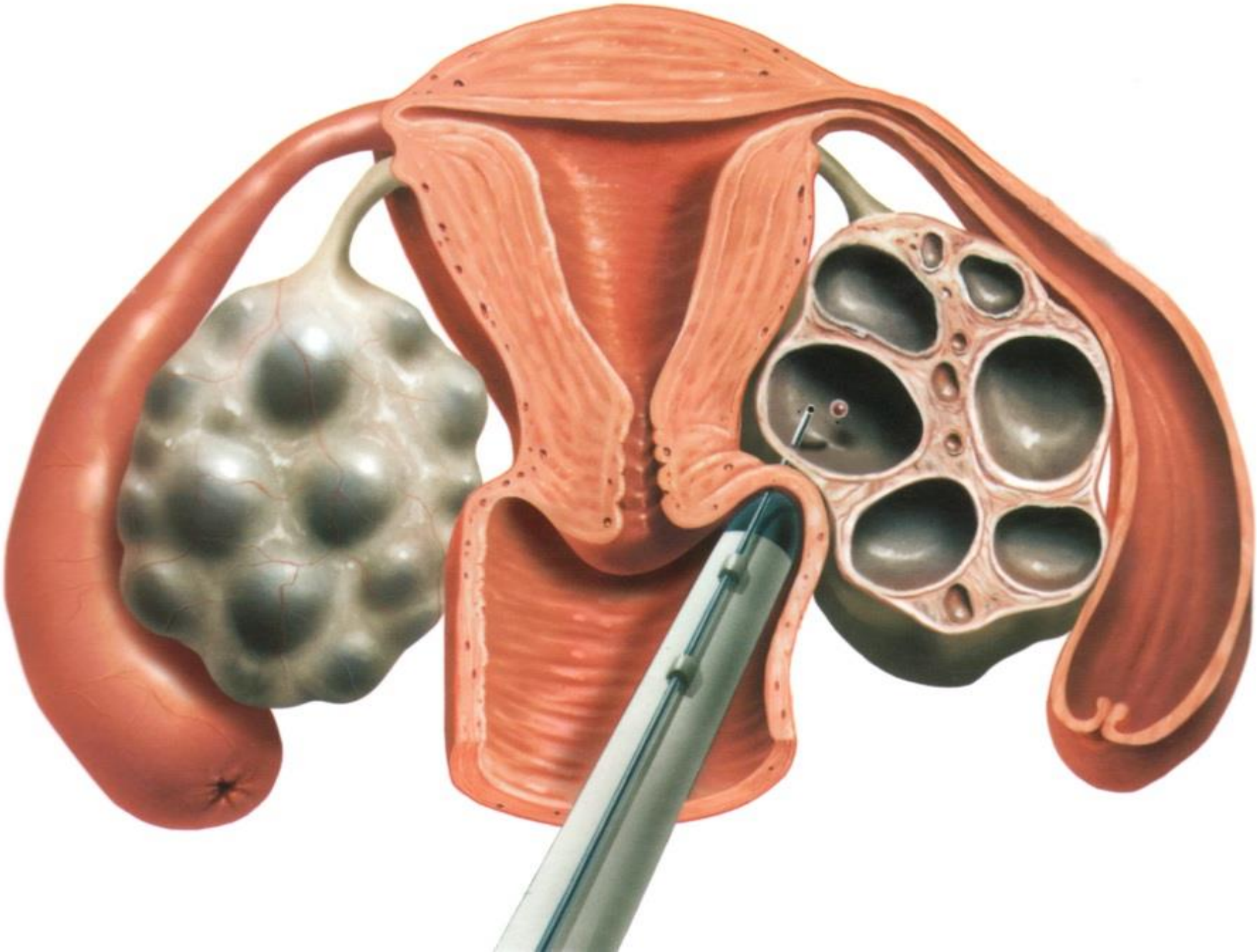
- Discussion with your physician prior to attempting a pregnancy
- Be aware of need to be monitored by obstetrician with special interest in haematological disease (maternofetal medicine specialist) and safer to deliver in a tertiary centre with access to other medical services
- Will need management plan in consultation with your heamophilia centre
- Pre pregnancy planning and genetic consultation

Fertility

- Approximately 1 in 6 couples have difficulty
- If chronically unwell, may not ovulate well
- Other fertility issues (can occur with or without bleeding disorders)
  - Ovulation difficulties and oocyte maturation difficulties
  - Low sperm count in partner
  - Blocked tubes or hydrosalpinx (fluid in tube)
  - Decreased fertilisation rate of oocytes
  - Endometriosis
  - Unexplained in 1/3 of couples

Fertility Treatment

- Avoid a multiple pregnancy – harder on your whole body and increased bleeding risk
- See a fertility specialist and be monitored
- Various treatment options
- IVF has risk of haemorrhage at time of oocyte retrieval
- Single embryo transfer only




Incubator
COOK
37.0
20
37.0
Temperature = 37 degrees

Preimplantation Genetic Diagnosis (PGD) for couples with Haemophilia and Bleeding disorders

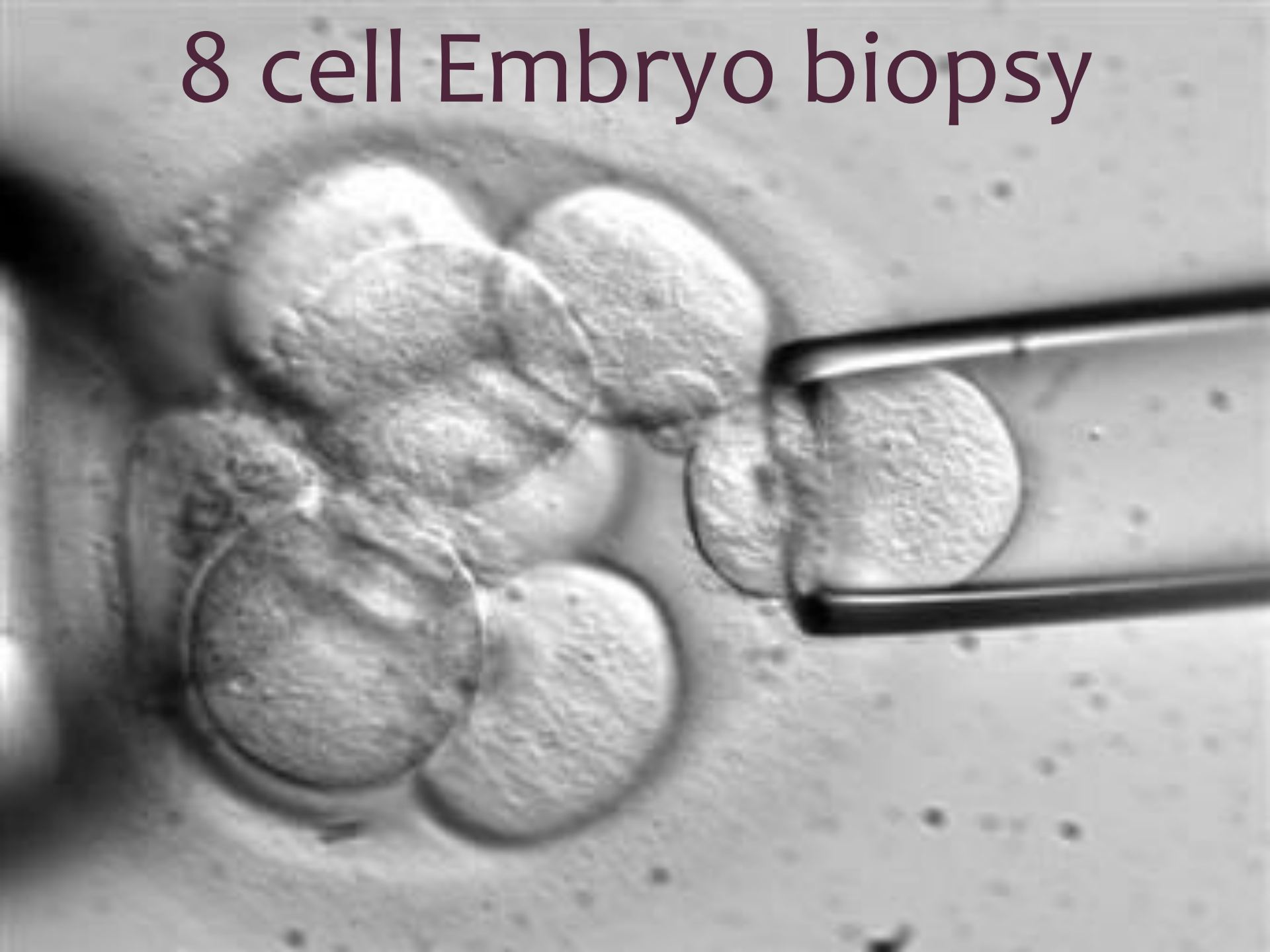
- This will depend on the exact genetic defect in the carrier (X linked) and partner if is a recessive disorder
- Haemophilia is the rare time we are allowed to know gender (NHMRC)
- Can develop a specific probe for the particular gene mutation through feasibility testing.
- This is separate to PGT (testing) which looks at aneuploidy rather than the single gene disorder associated with haemophilia
- Complex process as may need many embryos to achieve the desired outcome

Embryo freezing and PGD

- IVF cycle to collect oocytes and create embryos, then vitrification process to freeze embryos while awaiting results
- Cover oocyte retrieval with management plan to reduce bleeding risk
- Need good ovarian reserve

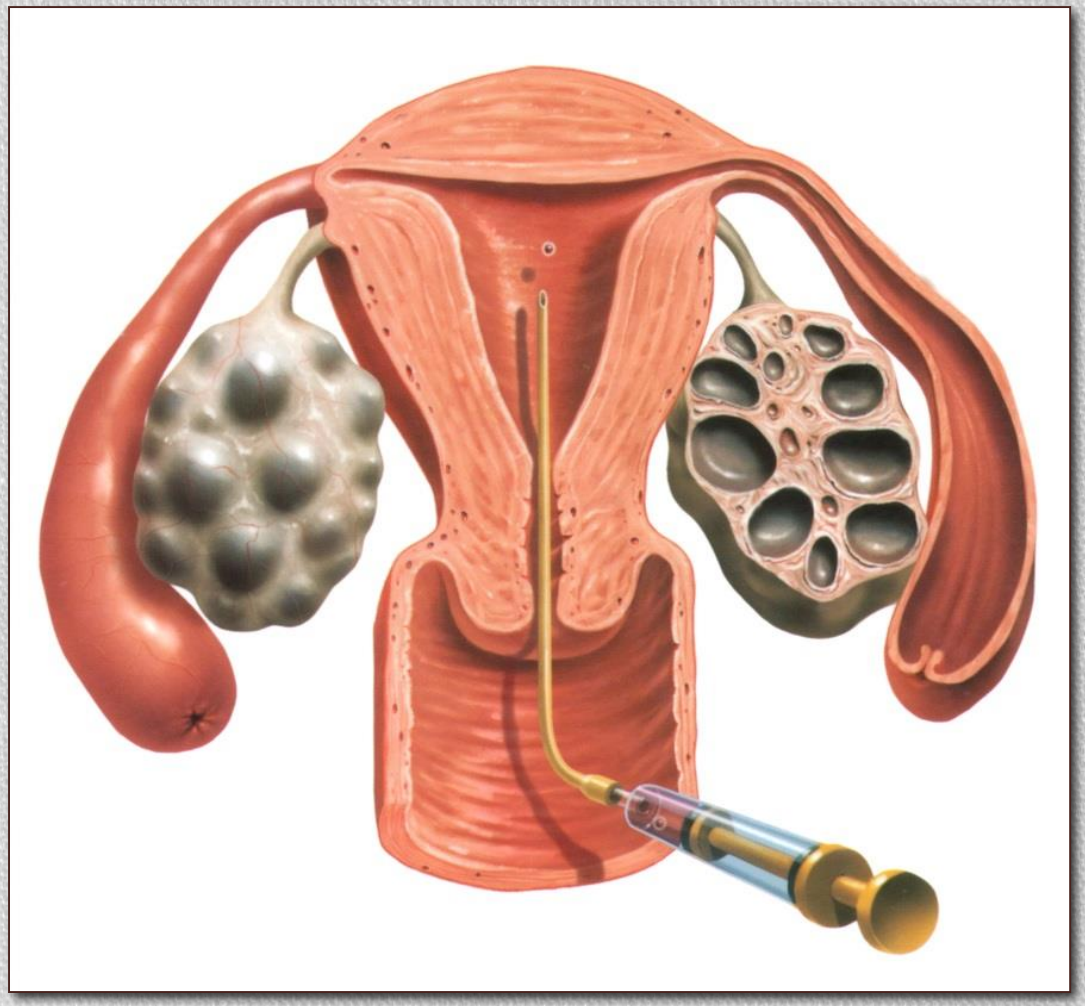
- Mandatory counselling and a stable relationship
- PGD of embryos (blastocyst) and NIPGT to test for aneuploidy (depending on age)

8 cell Embryo biopsy



Hatching Blastocyst

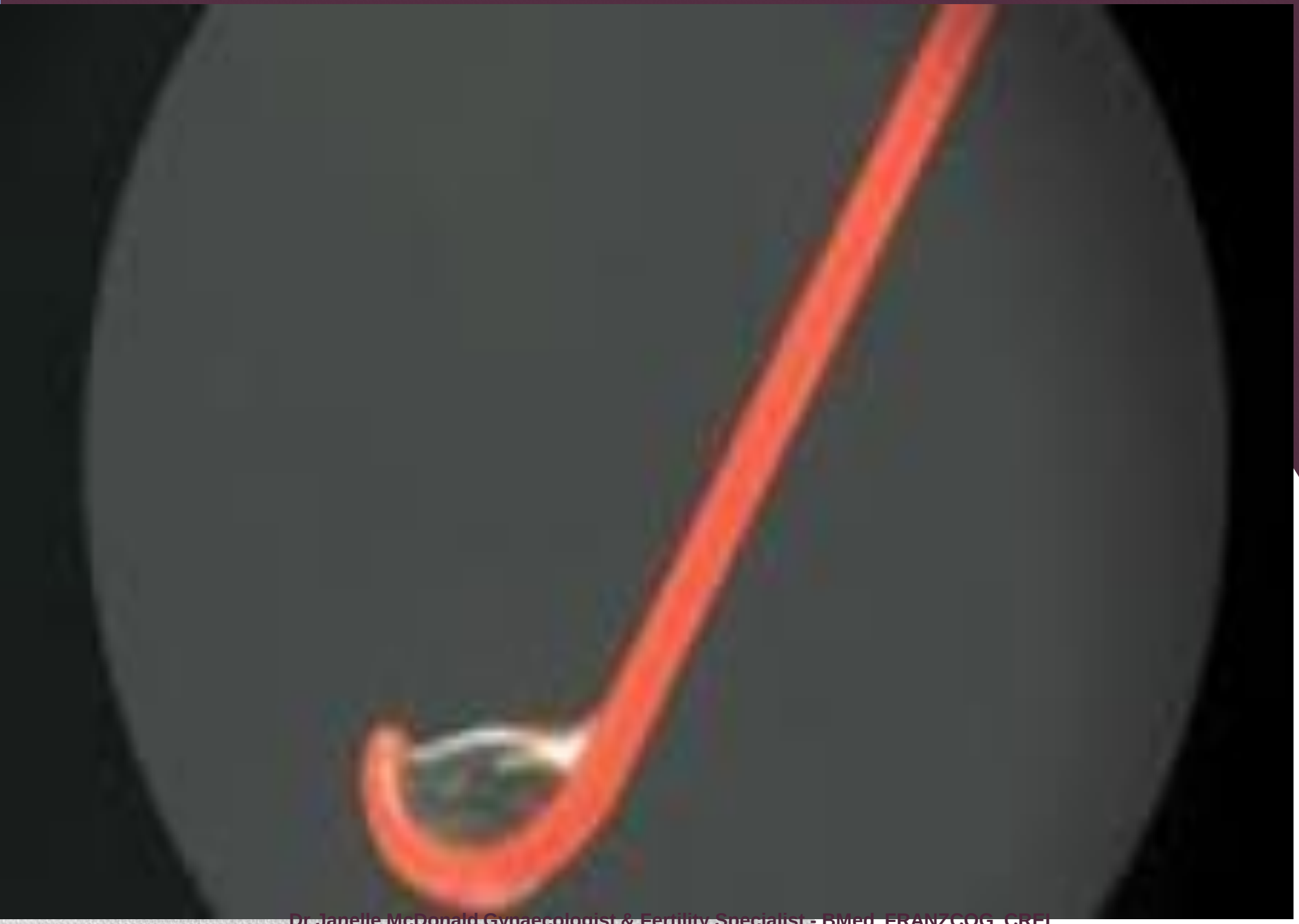
Single embryo transfer



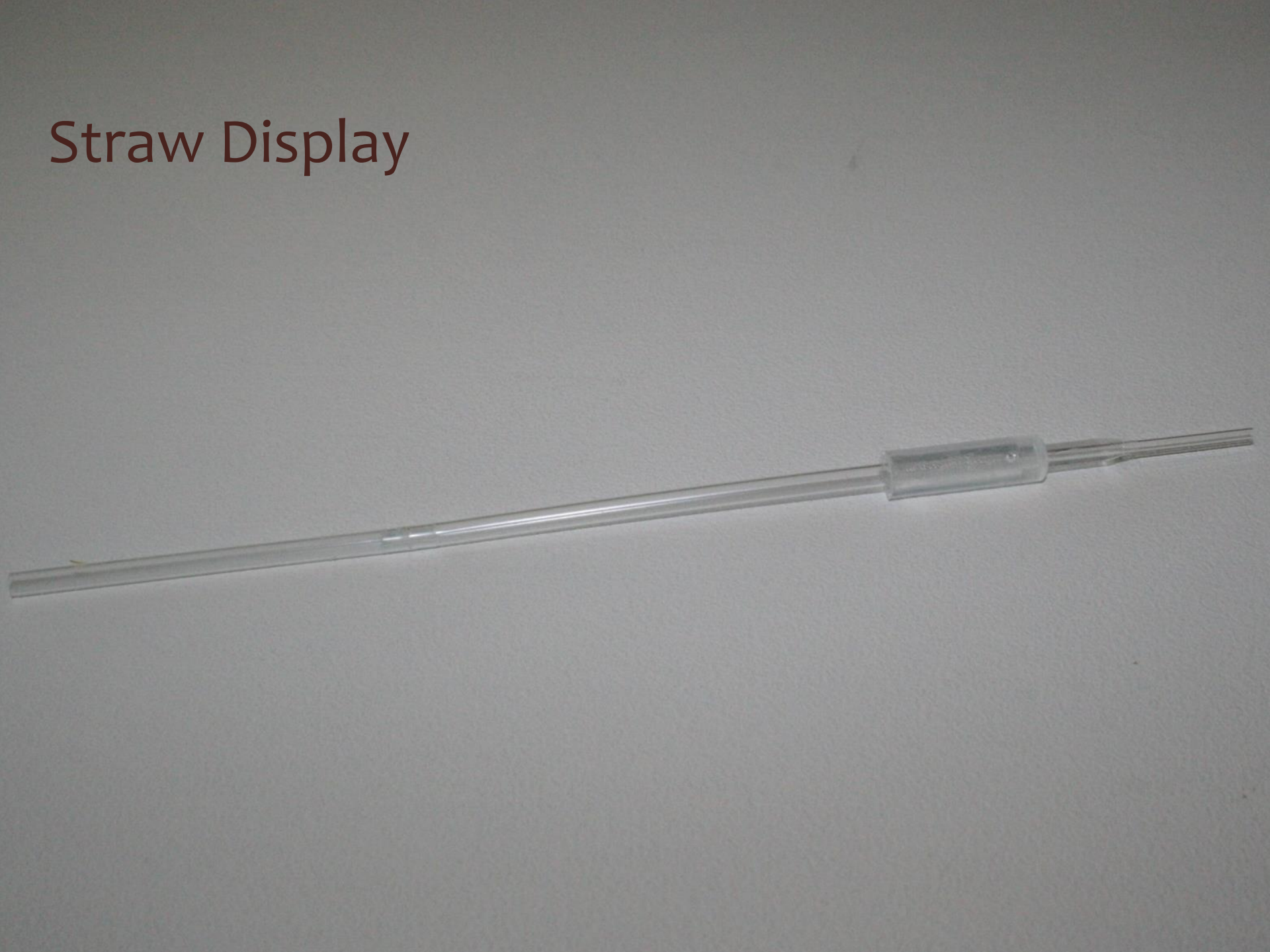
One embryo transferred
at a time

Embryo Storage

Vitrification (snap frozen)
@ -196 degrees



Straw Display



Inside the Nitrogen Dewar

Freeze Embryo & Sperm

Each patient has their own canister

Each dewar has 10 canisters / 12 spots

Pregnancies in Haemophilia

- Better outcome if good clotting factor levels. Monitor during pregnancy
- Be aware of first trimester risks with ectopics and miscarriage so early confirmation of viability of pregnancy
- Have a delivery plan
- Risk of post partum haemorrhage also needs to be considered

A Personal Case Study – Platelet type VWD

- Grandmother (affected nephews and her father the proband)
  - G3P3 with significant PPH after 3rd delivery. All NVD
  - Not diagnosed officially until her daughters first pregnancy
  - Significant haematuria with urethral prolapse in mid 60s
- Mother
  - – Moderate menorrhagia as teenager.
  - Diagnosed during 1st pregnancy with platelet type von willebrand disease
  - G3P3 with LSCS under biostat cover. 2 spinal and one general anaesthetic
  - Mirena with good effect
- Daughter (currently 10yo)
  - Significant nose bleeds and numerous haematomas
  - Great hockey player
  - Tranexamic acid works with great effect
  - Planned OCP for 3-4 packets in a row when attains menarche


MARIST
HOCKEY

Multidisciplinary approach

- Haematology team input (Haemophilia centre and management plan)
- High risk obstetric team
- Close monitoring of clotting factor levels
- Avoid unplanned pregnancies
- Utilise fertility tools to minimise risk of bleeding disorders in offspring

Summary

- Good to be aware of your individual circumstances
- Discuss with your team what is safe for you and what is not
- Seek appropriate contraceptive advice
- Plan for pregnancy after ensuring it is safe to do so
- Genetic health of the offspring should be considered
- Multidisciplinary approach important