

## General investigation of infertility

What is relevant in Primary Care?

### Case 1

Dear Dr

Re: Joan and John Baldwin, 2 Union Road, Clifton, Bristol

Would you please see this couple. Mr and Mrs Baldwin present to the subfertility clinic with a 4 year history of primary infertility. Mrs Baldwin is aged 35 years and has a menstrual cycle varying between 27 to 32 days in duration. Examination of Mr Baldwin reveals a testicular volume of 12 mls and 10 mls left and right respectively.

Yours sincerely

Dr I.M.A. Geepee

### Case 2

Dear Dr

Re: Imelda March, 2 Southwell Street, Bristol

I would be grateful if you would see this 26 year old woman and her husband Ferdinand. They have been trying to conceive for the past 1½ years. Imelda was using Mercilon for a few years, but stopped after the pill scare. Since then, her periods has been irregular, unpredictable and light. Pregnancy tests done while her menses were awaited have all been negative. She thinks that there is an increased amount of facial hair recently, but I am not convinced.

As a couple they seem happy and I understand they have intercourse several times a week. She is a little unhappy about her self image, having put on weight recently. She now weighs 80 kgs (and her height is 1.65 metres).

Thank you for seeing them and taking on their management.

### Case 3

Dear Dr

Re: Pam and Philip Anderson, 40 Hazel Drive, Bath

This couple have been married for 6 months but living together for 4 years. She is now 32. In her early 20s, she had 2 pregnancies, both terminated in the first trimester and both fathered by different partners. They have used no contraception for the past 3 years. Her husband, Philip, has had a child in a previous relationship.

She has presented several times to our surgery over the past number of years with vaginal discharge, but the current presentation is because of infertility. She has asked to be referred for investigation as she is convinced there is some physical reason for her not conceiving. Although they have been trying to get pregnant for the past 3 years, his job as a travelling salesman keeps him away from home a lot and therefore their exposure to the likelihood of conception is probably less than that 3 years.

## Infertility Investigations

### Aims & Objectives:

- Initial outline of three cases each covering aspects of infertility
- Important aspects of history taking, clinical examination appropriate to any couple with infertility

## Infertility Investigations

- what infertility means
- what assessment methods are available to us

## **Infertility**

- **Definitions**  
    **general**
- **primary**
- **secondary**

## **Investigation of infertility: relates to main causes**

- **ovulatory disorder**
- **male infertility - sperm dysfunction**
- **tubal damage**
- **unexplained infertility**
- **endometriosis**
- **azoospermia**
- **cervical mucus disorder**

## **Investigation of infertility: prevalence of main causes**

- |                                               |               |
|-----------------------------------------------|---------------|
| • <b>ovulatory disorder</b>                   | <b>20-30%</b> |
| • <b>male infertility - sperm dysfunction</b> | <b>14-25%</b> |
| • <b>tubal damage</b>                         | <b>15-30%</b> |
| • <b>unexplained infertility</b>              | <b>15-25%</b> |
| • <b>endometriosis</b>                        | <b>6-11%</b>  |
| • <b>azoospermia</b>                          | <b>3 - 9%</b> |
| • <b>cervical mucus disorder</b>              | <b>3 - 5%</b> |

## **Investigation of infertility: by individual cause**

### **Ovulatory disorders**

- **regularity of cycles**
- **recognition of mucus**
- **basal body temperature**
- **Serum progesterone in luteal phase**
- **Serum gonadotrophins in early follicular phase**
- **Ultrasound scans**
- **LH predictor kits**

## **Investigation of infertility: by individual cause**

### **Ovulatory disorders**

- **regularity of cycles**

## **Investigation of infertility: by individual cause**

### **Ovulatory disorders**

- **regularity of cycles**
- **recognition of mucus**

**Investigation of infertility: by individual cause**

**Ovulatory disorders**

- regularity of cycles
- recognition of mucus
- basal body temperature

**Investigation of infertility: by individual cause**

**Ovulatory disorders**

- regularity of cycles
- recognition of mucus
- basal body temperature
- Serum progesterone in luteal phase

**Investigation of infertility: by individual cause**

**Ovulatory disorders**

- regularity of cycles
- recognition of mucus
- basal body temperature
- Serum progesterone in luteal phase
- Serum gonadotrophins in early follicular phase

**Investigation of infertility: by individual cause**

**Ovulatory disorders**

- regularity of cycles
- recognition of mucus
- basal body temperature
- Serum progesterone in luteal phase
- Serum gonadotrophins in early follicular phase
- Ultrasound scans

**Investigation of infertility: by individual cause**

**Ovulatory disorders**

- regularity of cycles
- recognition of mucus
- basal body temperature
- Serum progesterone in luteal phase
- Serum gonadotrophins in early follicular phase
- Ultrasound scans
- LH predictor kits

**Investigation of infertility:  
by individual cause**

**Tubal damage**

- Laparoscopy / Hysteroscopy
- Hysterosalpingography
- Selective salpingography
- Contrast ultrasonography
- Chlamydia serology

old infection          recent  
infection

IFT :  $\geq 1$  in 512    CFT :  $\geq 1$  in 8

**Investigation of infertility: by individual cause**

**Male infertility**

- Azoospermia / Severe oligospermia

**Normal values (WHO)**

Volume	2-5 ml
Count	>15 x10 <sup>6</sup> /ml
Motility	>33%
Normal	>5%
MAR test	Negative (<10% adherent)
MNSC	>1

**Investigation of infertility: by individual cause**

**Male infertility**

- Azoospermia / Severe oligospermia
- Sperm dysfunction

PCT

Hamster oocyte penetration

reduced number of motility

reduced behavior in biological medium

such as cervical mucus or culture fluid

**Investigation of infertility: by individual cause**

**Male infertility**

- Azoospermia / Severe oligospermia
- Sperm dysfunction
- Antisperm antibodies

**Investigation of infertility: by individual cause**

**Endometriosis**

Only by laparoscopy

- Minor  
difficult to understand how fertility affected  
possible role for ovulation or peritoneal fluid
- Severe  
adhesion formation around the fallopian tubes , ovarian endometriotic cysts

**Minor Endometriosis**

Red papules of minor endometriosis

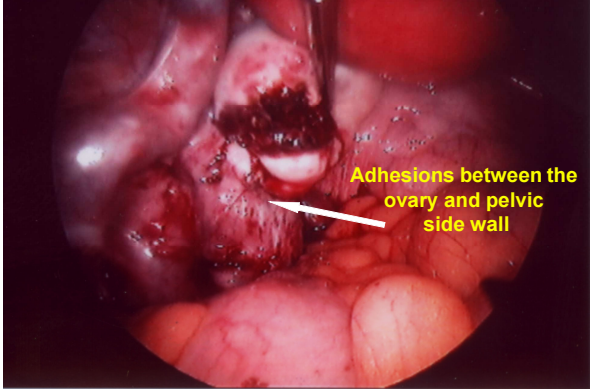


**Moderate to severe endometriosis**

Punctured "chocolate" cyst in right ovary



### Moderate to severe endometriosis



Adhesions between the ovary and pelvic side wall

### Infertility Investigations

#### Understanding

- what infertility means
- what assessment methods are available to us
- the importance of arriving at a working diagnosis