The Menstrual Cycle
Yeovil Fertility Unit
The menstrual cycle is the process controlled by hormones, during which an egg develops and is released from the ovaries and the lining of the uterus (endometrium) thickens in preparation for a possible pregnancy.

A female is born with thousands of egg cells (follicles) which lie dormant in the ovaries until puberty when rising hormones lead to the maturation of several follicles a month.

The menstrual cycle is under the control of three sets of hormones:

- Gonadotrophin releasing hormones
- Gonadotrophins - luteinising hormone (LH) and follicle stimulating hormone (FSH) from the pituitary gland
- Ovarian hormones - oestrogen and progesterone

The menstrual cycle can be divided into three phases:

**The follicular phase**
FSH stimulates the development of several follicles in the ovary, usually only one of these follicles matures. This dominant follicle produces oestrogen, which causes the endometrium to start to thicken. It also causes the mucus in the cervix to become thinner and more stretchy, allowing sperm to reach the egg more easily.
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1. **The follicular phase**
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   - It also causes the mucus in the cervix to become thinner and more stretchy, allowing sperm to reach the egg more easily.

2. **Ovulation**
   - Oestrogen levels that have been gradually increasing, peak. The LH levels increase rapidly (day 12 onwards) triggering the release of the egg from the ripened follicle, which usually occurs 36 hours after the onset of the LH surge.

3. **The luteal phase**
   - The levels of FSH and LH decrease. The ruptured follicle closes (after releasing the egg) and forms a corpus luteum, which produces progesterone. This prepares the endometrium even further, ensuring it is spongy, thick and full of nutrients so that a fertilised egg can implant into it. If the egg is not fertilised the corpus luteum starts to degenerate and progesterone and oestrogen levels start to fall.
   - The endometrial blood vessels constrict and the endometrium breaks down and is shed as a period (menstruation).

The length of the follicular phase can vary between women. However, the duration of the luteal phase is fairly constant, being 14 days in most women. The first day of the period is counted as day one of the cycle. The cycle runs from the first day of menstruation to the next first day.
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Ref: 14-16-153
Review date: 06/18