

## Menstruation and Its Disorders

**A Lecture given by Dr. J. McNaughton Christie at the Nurses' Club, Wellington**

I have chosen this subject for two reasons. Firstly, because there are so many "old wives'" tales related about it, and, secondly, because nurses are frequently asked for advice on the subject, and ought to know something definite. The great difficulty is studying the subject experimentally in that it only occurs in women and some of the higher apes.

Menstruation is a complex process whose most obvious sign is a periodic discharge of blood from the uterus. It only occurs during the reproductive period, and its onset and cessation mark the beginning and end of this part of a woman's life.

There are two opposing theories of menstruation; one is that menstruation is dependent upon ovulation and coincident with it. Ovulation is the escape and discharge of the ripe ovum from the ovary. In this view the graafian follicle, by its swelling during its development excites nerve impulses, which, being reflected on the vaso-motor system, give rise to local congestion. This view has, however, been corrected by modern operative work, which has proved that ovulation occurs at times which are quite independent of menstruation. Ripe or ruptured follicles are found at all times of the menstrual cycle. The other theory is that menstruation is governed by the corpus luteum, i.e., the yellow substance which fills up the cavity in the ovary from which a ripe ovum has escaped. It has been proved that destruction of the corpus luteum with the cautery delayed the appearance of the next menstrual period, and in some cases suppressed it altogether. This rather tends to prove that the corpus luteum is the part of the ovary which directly excites the menstrual period, probably through the medium of an internal secretion which is absorbed from it into the blood.

The age of puberty is influenced by climate, race, social position, and mode of life. It used to be believed that it started very early in the tropics and very late in the far north. Such is not the case. Its onset is really as early among the Esquimaux as it is amongst the inhabitants of tropical countries. The negro girl develops at sixteen, just as late as the Laplander or the Samoyed; and Esquimaux women may

become mothers at twelve, just as early as the Hindu women. While high temperatures favour early menstruation and lower temperatures tend to retard it, this is more seen in different parts of the same zone, than in the extreme zones like the tropical and the Arctic. Thus it starts somewhat earlier in the South of Europe than in the North.

Engelmann, who has made a very exhaustive study of the subject in America, states that the age of first menstruation in America is 14.3 for the labouring classes, and 14.2 for the educated classes. He concludes by saying, "Climate has practically no influence; race very little; mentality, surroundings, education, and nerve stimulation stand out prominently as the factors which determine precocity."

An important predisposing factor in fixing the age in any given case, however, is the customary time for the family. Anything below ten or above twenty must be considered abnormal. Cases of precocious menstruation are constantly being reported. Strausmann has collected fifteen cases where it appears during the first year of life. Frequently cases of precocious menstruation are a manifestation of some morbid condition of the uterus and appendages, such as ovarian tumours, myomata, and affections of the endometrium.

THE LENGTH OF THE PERIOD varies considerably in different persons. When once the individual standard has been established it should remain fixed, and any marked or prolonged variation from it is generally associated with a failure of general health, although it does not necessarily imply the presence of a local lesion. It may last from two to eight days, four or five being the average, and anything over a week being usually regarded as abnormal.

THE AMOUNT OF BLOOD LOST is very difficult to estimate. Different authorities give it as varying from two to eight ounces. The amount which is normal for one woman may be excess for another. Most of the blood is lost during the first two days of menstruation, whatever may be the length of the period. For the first few menstrual periods, before the function is well established, the amount often varies