

being induced by the exposure, trophic changes follow, producing a state of things for which it is futile to expect a remedy to be found.

The *cause* of all the menstrual irregularities above described is arrest of *ovulation*; the ovary atrophies, shrivels, shrinks up, becomes mobile in the pelvis, but usually out of reach, and assumes a senile appearance. Diagnosis is confirmed by cessation of function, and the clinical history forms an explanation of the cause of the change.

Treatment of amenorrhœa, under whatever form, resolves itself into treatment of ovarian atrophy; and hence the indication *first* and foremost is, to stimulate the sluggish action of the organ. Very few remedies, however, can be relied on to effect this result—if, indeed, any—and when the condition is consequent on blood poisoning, absolutely *nothing* will avail to produce any benefit. Tincture of cantharides, in ten to twenty minim doses, have been most efficacious in Dr. Meadows' hands, where remedies have not been resorted to in vain; and rue and savin have a reputation in the same connection. Iron will be of service when the constitutional state demands it, and blisters may be productive of some slight good. The most efficient agent, however, in any case of the kind, is undoubtedly *electricity*, and the method of applying it as a stimulant to ovarian activity has occupied the attention of several authorities. The late Sir James Simpson advocated the use of an intra-uterine galvanic stem, by the employment of which the uterus is excited, lumbar pains are produced, and a slight discharge is provoked. This is certainly not a true menstrual discharge, since it possesses no ovarian character, and is not preceded by the excitement of ovarian activity to ovulation. Moreover, this mode of applying electricity is attended with serious risks, it being within Dr. Meadows' experience that it

may be followed by retro-cellulitis and pelvic abscess, the stem in one case referred to having been removed with difficulty, and found to be covered with a thick membranous deposit from the irritated mucous membrane adjacent. Stimulation by galvanism for a short time daily has been adopted with better results, special bougies, sounds, etc., having been constructed to facilitate the passage of electrical currents to particular regions as required. Daily passage of sounds, introduction of sponge tents, and dry cupping, are other modes of promoting functional activity which are unscientific and extremely unsafe proceedings. By these means irritation of a kind is certainly set up, and a thin sanguineous discharge is provoked, but this is by no means *menstruation*, for, in the circumstances, the ovaries are not in the least degree affected, and without they are in active function ovulation and true menstruation cannot take place. It is nevertheless possible to transmit the electric current directly through the ovaries, several plans having been suggested for thus exciting them to action. The patient may be placed in a galvanic bath, or the poles of the bat-

tery may be adapted to secure the desired end in various ways. The bath is to be preferred in many cases, and in conjunction with it enemata of rue and tinct. cinnamon on alternate days, for five or six times, may be advisable.

It is well to remember that obesity is a frequent accompaniment of amenorrhœa, and even plethora, the latter being more common in married women than in single. Also, the uterus varies as the general condition of the body differs, and the general treatment must be carefully directed on well-known general principles, in regard to such conditions.

In *chlorosis*, amenorrhœa is not, as is generally insisted, a *cause*, but a *consequence* of the condition of the blood. To this is due the arrest of ovulation, and any attempt to restore the function must be addressed to improving the state of the blood, without any regard whatever to the generative organs pending essential changes in the circulating medium. These once brought about, menstruation will be re-established without any special attention being directed to it. The digestive system, however, should be seen to.

*Dysmenorrhœa* in some of its forms presents characters analogous to those exhibited by amenorrhœa. It may vary wonderfully, from a large amount of discharge to a mere "show." As the amount of nervous excitation produced is to be taken as a measure of the ovarian act, it is evident that when this is scanty and abortive pain will not accompany it, the effect produced, or energy displayed, being too infinitesimal to bring it about. Nevertheless, as long as a discharge however small in amount, is regular in appearance, there is good hope of restoring the functional vigor of the organ.

Scanty menstruation is commonly associated with obesity of figure, and sterility as a consequence of improper ovulation. Examination per vaginam of such cases shows that the organs generally are normal in form, etc., but that the ovaries are atrophic, and, as a rule, undiscoverable by the fingers in this position. The uterus may exhibit scarcely any alteration. In all such instances the diminution and cessation of the menstrual discharge are matters of time and degree, and are thus sharply separated from those in which total disappearance suddenly follows blood-poisoning. In case of gradual loss of function, emmenagogues may be found useful, but bromides and iodides are contraindicated when the signs are as above described. With them, however, electricity is signally serviceable, but must be frequently applied to secure benefit, the reason for this being that the remedy acts on a function which only recurs periodically, the ovaries and *not* the uterus being the organs implicated.

Entire *absence* of the generative organs is very rarely witnessed, only a single instance ever having come under Dr. Meadows' own observation. This was an infant which lived but a few minutes after birth: ovaries, uterus, and urinary organs were all wanting.