

agree with him, be regarded as a consensual pain. Others, however, regard it as an indication of actual ovarian inflammation.

The period when over-lactation may be said to have begun cannot be fixed. It is determined by the relative strength of the individual. Whilst it may be said that few women are able greatly to transgress the normal period of nine or ten months with impunity, it is certain that many show all the signs of over-lactation much earlier than this. We must, then, look to the symptoms, and not to the time the patient has been suckling.

In a considerable proportion of cases, the functions of the ovary cannot be suppressed beyond a few months, if at all. It is in vain that the attempt is made to keep ovulation, with its consequences—menstruation and pregnancy—in abeyance by taxing the breast. The ovary is the dominant organ, and sooner or later will assert its supremacy. Accordingly, we often find one of two things taking place in the course of lactation. First, menstruation returns, sometimes in a few months after labor, and generally within a year, except, indeed, phthisis or other exhausting disease intervene, or premature atrophy of the ovaries and uterus be induced; or, secondly, unless a new pregnancy occur. This may, or may not, be preceded by a menstrual appearance. Some women “never see anything from one pregnancy to another.” Whilst suckling, they fall pregnant, without exactly knowing when. The position of a woman in this predicament is indeed trying. She is laboring to support three beings at the same time. She is goading into simultaneous work the breasts and the uterus, which ought to relieve each other. No wonder if, under this double outrage to Nature, her own strength break down, and if the welfare of the child at the breast, and the existence of the embryo in the womb, be equally imperilled. Accordingly, we often observe that abortion occurs under these circumstances. This accident is the combined result of the degradation of the mother's blood, which becomes unfitted to carry on the nutrition of the embryo and of the structures which bring it into relation with the mother; of the reflex irritation constantly starting from the breast, and promoting congestions and contractions in the womb; and of displacement, such as prolapsus or retroversion and chronic metritis.

The condition of the uterus after the exhaustion of over-lactation is usually characteristic. Its bulk is somewhat excessive; the body is thicker and softer; its canal is patulous, easily admitting the sound; the cavity of the body is a little dilated, so that its walls are not in apposition, as in the healthy uterus; the appearance of the vaginal-portion is peculiar: its aspect is pallid, partaking of the general anæmia, its lips are swollen out in lobes separated by the scars resulting from the slight rents which were produced during labor; to the feel and sight the tumid os is flabby, soft, as if œdematous; all round the os, and some way inside the cervical cavity, the epithelium is often abraded; tenacious viscous mucus fills the canal; the sound always causes a little oozing of blood; and metrorrhagia is usual. Such is a common condition. Sometimes there is great congestion and appearance of vascularity. The abraded portions present little granulating elevations, secreting a semi-opaque mucus. The margin of the abrasion is well defined; where the

structure retains its epithelium-investment the color is bluish or purple. This color becomes much deeper if pregnancy has supervened.

Although ready to sink from physical exhaustion, the mother still clings to the burden which is dragging her to the ground. It often requires the most decisive authority the physician can exert to induce these poor women to give up the unequal struggle. The most effective argument often is to point to the child, which is generally pale, thin, and deficient in the firmness of healthy nutrition. We may thus more easily persuade the mother to give up a course which, whilst surely sapping her own health, is doing her child no good.

*Treatment.*—To wean, then, is generally the first injunction. The other indications are to restore the general health, to improve nutrition, to bring back the proper proportion of red-globules to the blood, and at the same time to cure the local disease.

In these cases quinine and iron are of inestimable value; strychnine is of scarcely less. They almost take rank as food. The doses should not be large, especially at first. One, or at most two, grains of quinine two or three times a day, and one-thirtieth of a grain of strychnine is enough. More will not be tolerated if the exhaustion is great. Quinine has a special beneficial action beyond that as a general tonic. It has a distinct property in causing contraction of the uterine fibre. In this way it promotes involution, the diminution of congestion, and the tendency to metrorrhagia. To produce this action larger doses are useful, and combination with ergot is of advantage. Strychnine possesses a similar property in a marked degree. That the diet should be as generous as can be digested, it is needless to say. Alcohol should form a moderate, strictly limited ingredient. The light wines of France, the Rhine, and Hungary are the best stimulants and aids to digestion. But where it can be digested, good stout or ale to the extent of a pint or two pints daily is to be preferred. Cod-liver oil and iron are often of use. Under this regimen, the blood is speedily enriched in quality, and the effect is seen in returning strength, in improved nutrition, and more vigorous performance of all the functions. We shall thus have gained one necessary condition for the repair of local mischief. Without this improved constitutional power, mere local treatment would probably fail.

The treatment required is generally simple. One condition is rest. This is partly attained by keeping the prolapsed uterus at its proper level by means of a Hodge's pessary. This brings singular aid also by relieving the local hyperæmia, by facilitating the return of blood from the uterus. Once every four or five days the abraded surface of the vaginal-portion and the interior surface of the cervix uteri should be lightly touched with tincture of iodine. Or a stick of three grains of sulphate of zinc may be introduced every third or fourth day into the cervix. A vaginal injection of oak bark, tannin, or sulphate of zinc, or alum should be used daily or even twice a day. The cold douche, if it can be borne without pain, is often useful. In summer the cold hip-bath may be employed.

Under this treatment the abraded surface will commonly heal over; the congestion disappearing, the bulk of the cervix becomes reduced; the tendency to prolapsus is lessened by this diminished weight of the organ,

and by the recovered tonicity of the vagina and other uterine supports. If at this time, when all active inflammation has ceased, any marked degree of enlargement of the vaginal-portion and bearing down remain, we find a useful remedy in the *potassa cum calce* or Vienna paste. This should be rubbed gently across the most enlarged lip of the os uteri, so as to produce a small eschar. This sets up a moderate degree of local irritation which stimulates to healthy granulation, and excites absorption. The raw surface will cicatrize within a week or ten days, and the bulk of the vaginal portion will commonly be reduced.

This treatment, although limited to the vaginal-portion and the canal of the cervix, exerts a beneficial action upon the enlarged body of the uterus. It is certain that the congested, inflamed state of the vaginal-portion keeps up a similar condition of the whole organ; and it is also a matter of experience that remedies applied to the vaginal-portion act not only by removing the irritation of contiguous disease, but also by derivation. The eschar, for example, set up by *potassa cum calce* upon the os uteri, acts by derivation upon the body as a blister does upon internal organs.

To set involution going, when the case is acute, Simpson recommends local antiphlogistics. This treatment is especially indicated where any trace of inflammation remains. But in cases where all inflammatory action seems to have died out, he says, a local antiphlogistic course has the effect of setting up absorption in the enlarged organ. If the patient is not very weak, he advises the application of a dozen leeches to the vaginal-portion of the uterus or to the perineum.

In these more acute cases, and in all the more chronic cases, he insisted on the use of counter-irritants. Antimonial or croton ointments, or the cantharides blister applied to the hypogastric region, or painting this region with tincture of iodine until it produced vesication, were amongst his remedies. At the same time he kept the vaginal-portion of the cervix uteri immersed in ointments of mercury or iodide of lead, or bromide of potassium introduced as vaginal pessaries. As internal remedies he relied upon iodide and bromide of potassium.

Scanzoni recommends the introduction into the vagina every night of a sponge saturated with a solution of iodide of potassium in glycerine, in the proportion of one in eight, or of an ointment consisting of five grains of iodo-chloride of mercury in an ounce of lard. I have found the iodine of glycerine decidedly useful. The patient may apply it herself by the aid of my speculum. (Fig. 54, p. 156.) But as I have found solvents act better if applied more directly, my practice now is to introduce into the cavity of the uterus twice a week during intermenstrual periods a little iodide of mercury ointment, or tincture of iodine, by help of the tube. (Fig. 52, p. 155.)

I have also seen reason to think favorably of the use of the bromo-iodic waters of the Woodhall Spa.

One is frequently asked "How long will it take to get well?" To this the physician can give no definite answer, unless all the conditions of cure be placed fairly within his control. Whilst the patient is pursuing more or less actively her usual course of life, and the treatment is often interrupted, the disease may linger for any length of time. But take

her into hospital, where all the necessary measures, negative and positive, hygienic and medical, are systematically carried out, and a cure within two or three months may with confidence be predicted.

Closely associated with this subject is that of *inflammatory engorgement and abscess of the breast*. This condition is commonly the result of, and bears evidence to, constitutional debility, and unfitness of the breast for its function. It occurs at two distinct periods. The most common is at the onset of the attempt to suckle. The other period is after lactation has been kept up for some months. Strumous women, who are especially liable to glandular and connective-tissue engorgements, are particularly liable to early abscess of the breast. The constitution and the organ at once rebel. If the attempt to force them be persisted in, phlegmons and abscesses are sure to form. It is not within the scope of this work to discuss the physiology and pathology of pregnancy and childbed. I refer to lactation only in reference to our present subject. Much as, both in the interest of mother and child, it is desirable to suckle, it is better, where the function is not likely to be successfully carried on, not to make the attempt. It is rare for abscess to form where no attempt to suckle has been made. The constitutional conditions which contra-indicate lactation are general debility, anæmia, a strumous diathesis; the local conditions are, depressed undeveloped excoriated nipples, or evidence of phlegmons in the breasts. These conditions, and others, lead to retention of milk. The secreted milk clogs the milk-ducts, and this condition leads to stasis, and inflammation in the capillary network surrounding the acini. When it has been determined to abandon lactation, it is a common practice to apply belladonna to the breasts, under the belief that this drug possesses the property of drying up the milk. I very much doubt its efficacy. I have more faith in the internal use of iodide of potassium. To check secretion, Dr. Alstätter extols conium, given in one or two-grain doses four or five times a day. The distinct indication is to avoid stimulating or exciting the breasts. If it be desired not to promote the secretion of milk, the breasts should be kept in perfect rest. It is in carrying out this indication that the physician will experience the greatest difficulty. It is a conviction rooted in the minds of nurses with all the tenacity of prejudice, that friction, and that not always gentle, and "drawing the breasts," are necessary. This infallibly keeps up irritation. Engorgement and inflammation are too apt to follow. One condition of rest is repose in bed, another is gently supporting the breasts, so as to obviate any tendency to hanging down; they should be kept well lifted up from below and from the sides. The easy return of the blood from them thus diminishes the risk of stagnation. Another way to promote rest is to use the arms as little as possible. If there be any engorgement, it is well to keep the arm of the affected side in a sling. Cooling lotions, as of acetate of ammonia and alcohol, are useful. It is only when there is great tension that the overflow should be gently abstracted by a breast-pump, or, better still, by the soda-water bottle heated by hot water, and then applied empty, so as to draw by vacuum. This is far safer in the hands of an ordinary nurse than the breast-pump. Saline purgatives, with digitalis, and moderate unstimulating diet, especially postponing the conventional stout, are essential adjuncts.

When mammary abscess occurs after lactation has been carried on for several months, this is almost certainly because the system has been so reduced that it is no longer fit to keep up the function.

Simpson described (*Med. Times and Gaz.*, 1861) *super-involution of the uterus* as a morbid state the opposite of *sub-involution*. It is produced when the disintegrating process set up after delivery goes on to such an excessive degree as to reduce the uterus to a size decidedly below its normal dimensions in the unimpregnated state. He relates a case of a woman aged 20, who never menstruated after her first labor. Two years after labor she was admitted to the Edinburgh Infirmary. There was amenorrhœa, great constitutional disturbance, frequent attacks of diarrhœa, which she believed to be most severe at recurring monthly intervals, the dejections being sometimes tinged with blood. The mammæ were shrunk and flat. The uterus was small; its cervix much atrophied, os contracted. Sound penetrated 1.5". Albuminuria and dropsy preceded death. The uterus was one-third below the natural bulk; the ovaries were atrophied, showing no Graafian vesicles.

Sometimes atresia from cicatricial closure of the uterus is followed by a true amenorrhœa—not simply retention. Dr. Lizé reports such a case in the *Union Médicale*, 1863. The uterus seems to become atrophied from obstruction to the performance of its functions.

In various parts of this work, this process of hyper-involution or premature atrophy is referred to. I believe it is far from uncommon. Sometimes, as in the case quoted from Mr. Walter Whitehead (see p. 411), it may go to the extent of removing the uterus.

I have encountered it sometimes with partial success by the use of the galvanic pessary.

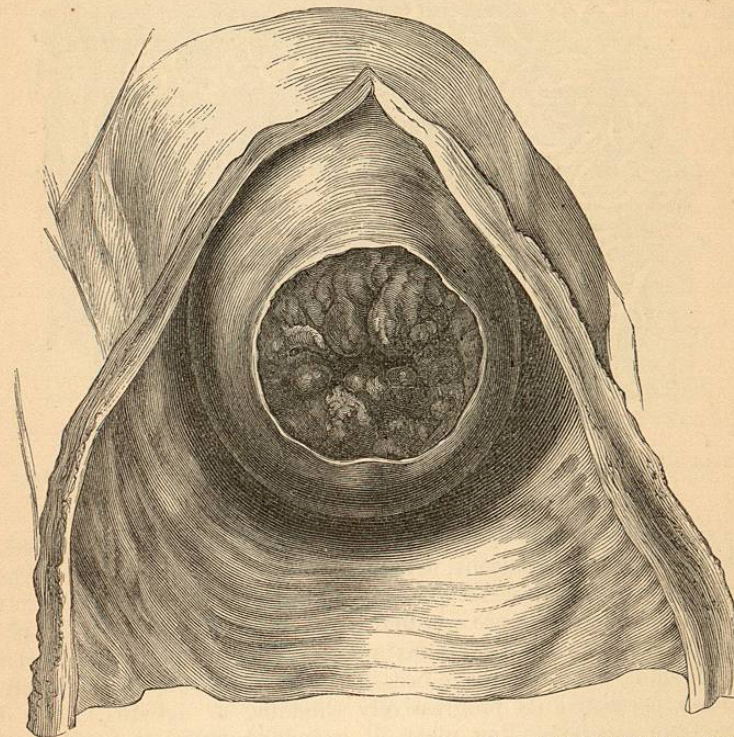
#### RESULTS OF INJURY TO CERVIX UTERI DURING LABOR.

If we pursue the clinical, and, in this instance, the historical order, in the study of the most common morbid conditions of the uterus, we shall find succeeding the first stage of tumefaction, ecchymosis, and congestion of the mucous and sub-mucous tissues of the cervix, and the shedding of the bruised epithelium, the following condition. The whole cervix, especially the vaginal-portion, is sensibly enlarged, tumid, gorged with blood, œdematous; for a definite area around the os, the part is bared of epithelium, giving a pulpy granulating appearance to the part; this part is further divided into lobes or prominences, the result of the small lacerations which took place during the passage of the child; this bared part is red, angry-looking from the villi being full of blood, bathed with viscid and purulent-looking secretion; the part of the vaginal-portion, beyond the line of epithelial denudation, looks bluish-red, owing to the gorged bloodvessels being seen through the epithelial investment. The vaginal-portion in this state easily bleeds under examination, under coitus, and under any exertion or emotion. Leucorrhœa is generally copious. Lumbar pain is constant. General prostration certainly attends. Some degree of prolapsus is rarely absent.

A similar state exists throughout the cervical canal. The rugæ are prominent, bared at least in part. The surface is bathed in viscid, clear,

or turbid mucus. The canal is more patulous than usual. Intensely vascular, and the vessels badly protected by delicate new epithelium, which is being shed as fast as formed, the intra-cervical surface easily bleeds, so that metrorrhagia is common. All this can be easily seen through the metroscope, or even in part through the bivalved speculum, whose blades, made to diverge, open the os externum. At this stage the

FIG. 101.



Shows Condition often observed a Month after Labor. Congestion of Vaginal-Portion Epithelia Denudation around the Os (R. B.). (From Nature.)

glands on the vaginal-portion, sharing in the local congestion and inflammation, are apt to get obstructed. One may often see them as dark-red nodules shining through the granulations bared of epithelium. These persist often after the surrounding structures have recovered, and may become the foci of fresh irritation. They may be cured by lightly pricking them.

Some of these objective conditions are fairly illustrated in Fig. 101, drawn from Nature from a case observed about a month after labor. This drawing shows also the enlarged relaxed state of the fundus of the vagina which attends this stage of the affection. The microscopical condition of such a case is represented in Fig. 102.

By some this condition is called "*inflammation*;" and the state of the os uteri, bared of epithelium, is called "*ulceration*." In some cases,