

LANDIS (H.G.)

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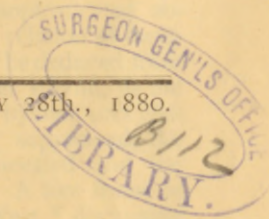
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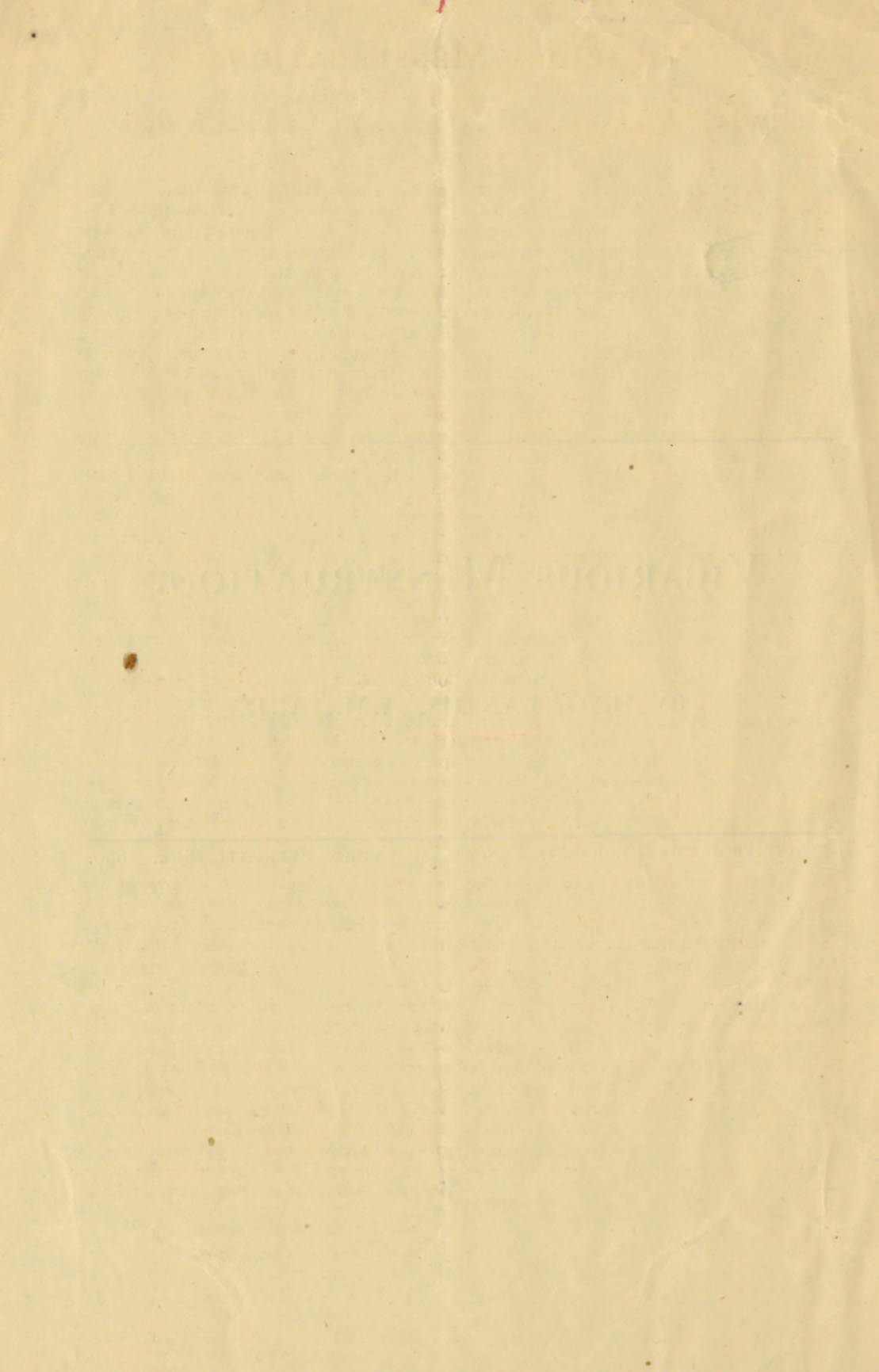
# VICARIOUS MENSTRUATION.

BY H. G. LANDIS, A.M., M.D.

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# VICARIOUS MENSTRUATION.

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At a recent meeting of the Franklin Co. Medical Society, Dr. S. Loving reported a case of vicarious, or in that instance it might better be termed, supplemental menstruation, in which a woman had a discharge of blood from the nipples at or near the menstrual periods. In view of the fact that the text-books in common use, such as Leishman and Playfair in Obstetrics, Thomas and Emmett in Gynaecology, Flint and Da Costa in general practice, mention the subject with a brevity calculated to detract from its importance, and also fail to give any instances of its occurrence by way of illustration, I have thought it well to collate a number of cases already recorded in our didactic and periodical literature with a few unpublished ones. From their study we may the better appreciate the importance and nature of this curious disorder. The occurrence of vicarious menstruation was well known to the ancients, who, following the views of Aristotle concerning the menstrual flow, saw nothing very remarkable in the phenomenon. Hippocrates<sup>2</sup> alludes to it without comment and quite as a matter of course. Aretæus,<sup>3</sup> in speaking of hemoptysis, says: "This mode of bringing up blood is common with women who have not their monthly purgation, and appears at the periods of the purgation and stops during the interval between them, and if the woman is not cured, the discharge upwards of blood will revert for many periods and also in certain cases the vessels burst from fulness." This notion of an outlet of some sort as necessary to relieve a monthly plethora, was evidently before Ambroise Pare when he said,<sup>4</sup> "In my wife when she was a maid, the menstrual matter was excluded and purged by the nostrils. The wife of Peter Feure of Casteaudun was purged of her menstrual matter by the dugs everie moneth, and in such abundance that scarce three or four cloaths were able to drie it and suck it up. We may also see in these words a suggestion of the belief that the menstrual blood is a true secretion of the uterus, which was

advocated by Haller and John Hunter. The gradual change of doctrine from a belief in the general character of the menstrual phenomena to one in their special connection with the uterus, from a belief that it was only blood the escape of which relieved a monthly recurring plethora to a belief that the womb excreted or secreted a peccant humor, makes a curious change in the manner of reporting cases of vicarious menstruation. Thus Denman,<sup>1</sup> translating almost literally from DeGraf, says: "When women are deprived of the common uterine discharge, they are sometimes liable to periodical emissions of blood from the nose, lungs, ears, eyes, breasts, navel, and almost every part of the body." But he adds, "These, which are very rare, have been deemed deviations of the menses, and communicated with the most scrupulous exactness, as if some great advantage was to be obtained from our knowledge of them." From this and what follows it appears likely that his opinions concerning its rarity and unimportance were in part influenced by the difficulty in accounting for it and of reconciling the facts with his theory. Hence our astonishment at finding a few pages on, this remark, which may serve as a warning to us. "To unsophisticated observation, and to a mere relation of facts, or the inferences plainly to be deduced from them, men are unwilling to submit, as the powers of the imagination by such proceeding would be checked or suppressed, the want of understanding concealed and the parade of learning lost."<sup>2</sup> A like frame of mind may account for West<sup>3</sup> dismissing such cases curtly as "medical wonders;" but we may thank him for putting on record the fact that the vicarious discharge may be associated with menorrhagia. The ovular theory of menstruation gave a new aspect to these cases and the latest doctrines still another. With what new doctrines the womb of the future is pregnant we cannot tell, but having thus briefly noted the progress of opinions and the different notions of its frequency will proceed to the more practical method of reciting cases and draw-

1. Read before the Franklin County and Central Ohio Medical Societies, and published at their request.

2. Aphor. V. 33.

3. Ed. Sydenham Society, p. 267.

4. Opera, page 638.

1. Midwife, Frances' Edition, page 174.

2. Ibid, page 178.

3. On Women, American Edition, 1861.

ing "inferences plainly to be deduced from them," as the usually judicious Denman remarks.

Churchill gives the subjoined references<sup>1</sup> and reports some cases. In Dr. Law's practice a girl *æt.* 21, previously in bad health, missed a menstrual period and had a hemorrhage from the ears. Vomiting next occurred and finally diarrhoea, after which her health was improved and menstruation became normal. In Dr. Dunlap's practice a fatal case occurred, no less than six quarts of blood being lost from the *gums* at one period. He had himself seen a case in which profuse *salivation* seemed to take the place of the menses, and quotes Liebold as having seen a similar one. Blundell<sup>2</sup> reports a case in which the flow came from the hand for three successive periods, preceded by a throbbing in the radial artery. Bedford<sup>3</sup> records the account of three young girls, menstruating respectively from the umbilicus, by epistaxis and by hæmatemesis. Ashwell<sup>4</sup> reports a case of vicarious hemorrhage from the ear, one from the breast, and one in whom a profuse leucorrhœa took the place of the flow for a number of periods. He also alludes to the fact that the vicarious flow is sometimes discharged gradually and sometimes in gushes. Bittner of Halberstadt<sup>5</sup> records a case of habitual menstruation from the breast. The flow continued five or six days, becoming white and mucilaginous towards the close. A like case is reported by P. Megnet,<sup>6</sup> in which a girl *æt.* 17, menstruated from the breasts a whole year at the usual periods; menstruation then took place from the natural channels but irregularly. In the practice of Dr. Atlee<sup>7</sup> of Lancaster, a case occurred in which menstruation was regular and plentiful, but was supplemented by hemorrhage from the stomach and nipples. This account is accompanied by that of a negro woman who menstruated from the mouth and seems to have been cured by the removal of defect-

tive teeth and the removal of fungous gums. A mere list of cases might be indefinitely prolonged, but it will be more instructive to group them as illustrating special points.

1. The vicarious discharge may occur only at the beginning or close of the woman's menstrual life; it may also appear at any time for one or more successive periods, or it may occur as the only mode throughout life, as in a case quoted by Watson from Pinel; nor need it interfere at all with conception. Obermeier<sup>1</sup> relates a case in which a girl menstruated only by epistaxis, except for one day in her fifteenth year. Conception occurred nine years after the beginning of puberty, causing a cessation of the periodical epistaxis, which returned six weeks after her delivery at full term. A second pregnancy in progress at the date of the report also stopped the flow. Barrett<sup>2</sup> also reports a case in which the rectum was the sole seat of the discharge, which was stopped by pregnancy and reappeared fifteen months after delivery, to be again checked by a second and later by a third pregnancy. During the discussion of this subject at the Franklin County Medical Society, Drs. Loving and Denig each reported a case in which leucorrhœa was the only exponent of menstruation until after the birth of four or five children.

2. The same tissues may not be the invariable locality in any individual. Dewees<sup>3</sup> quotes from Gardiner the case of a girl who menstruated regularly for six months "from little wounds in the leg occasioned by the breaking of small vesicles." For the next year the same performance was enacted upon the arm. For six months she menstruated from a whitlow and chap upon the left thumb. An attack of facial erysipelas left some opening upon the face from which she menstruated for two years, returning to the left thumb for a season. Variety being the spice of life, the navel next officiated for five months until an accident to the internal malleolus of the left ankle relieved it for two months. When not menstruating from any determinate spot she discharged blood by epistaxis or hæmatemesis, preceded by headache and giddiness.

3. From the so-called sympathy between the uterus and the breasts, we would naturally expect the latter to be the elective seat of the hemorrhage. Astley Cooper,<sup>4</sup>

<sup>1</sup> Capuron, *Malad. d. femmes*, p. 120. Astruc, v. 1, p. 158. Haller's *Physiol.* Liebold's *Frauenzimmerkn.*, vol. 1, p. 338. Astbury *Edin. M. and S. Journal*, vol. 17, p. 307. *Edin. Med. Essays*, vol. 3, p. 341. Hamelton, *Med. Commur.*, vol. 11, p. 337. *Mem. of Med. Soc.*, vol. 3, p. 502. Davis, *Obst. Med.*, vol. 1, p. 242. Lacock, *Cyclop. of Pract. Med.*, vol. 1, p. 71. *Med. Gazette*, July 29, 1837. Guy's *H. Reports*, No. 5, p. 156. *Am. Med. Journal*, April, 1850. *Edin. Month. Journ.*, Oct., 1850. *Journ. de Med. et Chirurg.*, Feb., 1850.]  
<sup>2</sup> *Midwifery*, *ped.*, 1840.  
<sup>3</sup> *Obstetric Clinique*, p. 80.  
<sup>4</sup> *Dis. of Women*, 1825.  
<sup>5</sup> *Lancet*, Dec. 18, 1824.  
<sup>6</sup> *N. Y. Med. Journal*, 1872.  
<sup>7</sup> *Ohio M. and S. Journal*, 1849.

1. *Phila. Medical Times*, Nov. 9, 72.  
 2. *N. Y. Med. Journ.*, 1876.  
 3. *On Women*, 1837.  
 4. *Philadelphia*, 1845, page 61.

Birkett<sup>1</sup> and Gross,<sup>2</sup> but *mirabile dictu* not Velpeau, describe a form of apoplexy or ecchymosis of the breast occurring usually a few days before the menstrual period. The first records four cases; in one of which blood escaped from the nipples. Puech,<sup>3</sup> however, in analyzing a number of cases, found that the order of pregnancy was, from the stomach, 32, breasts 25, lungs 25, and from the nose 18. In 183 cases the menses were absent, and in 15 present. A most inconvenient and unsightly location is upon the lips, as in a case reported by Parvin<sup>4</sup> and illustrated by photographs of the girl before and during its continuance. The swelling and discoloration would indeed dispose such a one to separate herself from the congregation until the days of her purifying were accomplished.

4. The exciting cause of vicarious menstruation does not seem to be at present within our ken, and probably not the same in each instance. Caro<sup>5</sup> reports a case of menstruation from the gums following an attack of malarial fever, which, in the opinion of Dr. Isaac Taylor,<sup>6</sup> predisposes to this event. A previous condition of ill-health is frequently mentioned in the report of these cases. Goodman<sup>7</sup> gives cases of vascular naevi as the seat of hemorrhage, in one of which he predicted before the time of puberty that the patient would menstruate from a naevus. On the other hand may be cited a case observed by our friend Dr. J. H. Pooley. A young married woman had upon her lower lip a naevus as large as the end of the thumb. During childhood it existed only as a telangiectatic spot or "red spider," scarcely noticeable. At the age of puberty it became a little elevated but was prominent only at the menstrual periods. But in the four months of pregnancy it had attained the size noted above. Disease of the womb is sometimes coexistent, perhaps always in some form, though Peuch specifies that in his cases the genital organs were healthy as a rule.

Lecoite of Eu,<sup>8</sup> records the case of a girl *æt.* twenty-nine years, who had never menstruated, but had a periodical discharge of membranous casts from the uterus, blad-

der, stomach and rectum. After some time a sanguineous flux from the ear was established. Other cases of membranous exfoliations from the uterus are on record, but the degree of uterine disease when present is usually spoken of as slight. It appears to be sometimes hereditary. Laycock<sup>1</sup> mentions among other cases two of "sanguineous ephidrosis of the feet, occurring only during the menstrual period when any extra exercise was taken. The subject of these were a mother and a daughter, both of very hysterical habit." Barnes<sup>2</sup> records the case of a young lady *æt.* twenty-four, with vicarious hæmatemesis, sometimes dangerously profuse. "A sister, when sixteen, who had hitherto menstruated scantily had hæmatemesis at her periods. A brother *æt.* five, died of epistaxis after purpura. The father died of epistaxis at fifty-six; caused, his wife says, by intemperance, which produced epilepsy. Whenever he had a fit, he had hemorrhage."

5. The possession of a womb does not seem to be a necessary factor in menstruation. Congenital absence of the womb in a case of vicarious menstruation was found in a case observed by Cazeaux.<sup>3</sup> This woman, *æt.* twenty-one, had an imperfect development of the external organs as well and no hair upon the pubes. The flow came from the vagina. A case occurred in the Pennsylvania Hospital<sup>4</sup> in 1873, in which the most careful examination could not discover a uterus and in which the ovaries were also rudimentary in size. The patient was twenty-two years old and had menstruated by epistaxis and other hemorrhages since her fourteenth year. At the menstrual molimen she suffered from headache and pelvic distress which was on several occasions relieved by the application of leeches to the thighs and abdomen. Barnes<sup>5</sup> gives an account of a case in which the woman had menstruated several times from the nose and gums and then died from pulmonary congestion and œdema. The autopsy showed a complete absence of the uterus, the ovaries being well developed and containing a recent "false corpus luteum." Menstruation from the vagina or cicatrix has also occurred after the ablation of the uterus; thus, W. G. Drake<sup>6</sup> reports the removal of the entire

1. Holme's Surgery.

2. First Edition, volume 1, page 1061.

3. Gazette de Hospitaux, April 21, '63.

4. Proc. American Gyn. Society, 1876.

5. New York Medical Record, 1878.

6. Ibid.

7. American Journal Obstetrics, October 1878.

8. Lancet, 1851.

1. Nervous Diseases of Women, 1849, page 220.

2. Diseases of Women, page 181.

3. Midwife, 4th Edition, page 508.

4. Philadelphia Medical Times, October 24, 1874.

5. Op. Cit.; page 182.

6. Atlanta Medical Journal, Aug., 1875.

uterus and Fallopian tubes from a woman who menstruated regularly afterwards from the vagina. And that there may be no doubt as to the non-essential part fulfilled by the womb, we have accounts in the older writers of a monthly flow of blood from the urethra and rectum of some men.<sup>1</sup> Such a case is reported by Townsend,<sup>2</sup> of a male; who, for thirty-nine years, had a sanguineous flow every lunar month, unaccompanied by pain. Dr. N. O. King<sup>3</sup> reports the case of a man *æt.* twenty-two years, with a flow from the sebaceous glands behind the corona glandis. It was sanguineous, homogenous and thick, flowed at each period to the extent of one or two ounces, and lasted from three to six days. It had continued periodically for three years at the date of record.

6. The practical aspect of the subject is illustrated by the liability of making an erroneous diagnosis of a given case. A. J. Stone<sup>4</sup> reports the case of a woman who had vicarious menstruation from the lungs, coming on several months after child-birth. She passed through the hands of a number of physicians who made the diagnosis of tubercular consumption and subjected her to much unnecessary medication. She was finally cured by scarification of the uterus and topical applications to the endometrium. My friend, Dr. T. C. Hoover, informs me of a woman seen by him, who menstruated vicariously by the rectum; but having tormina and tenesmus was at first supposed to be suffering from dysentery and treated accordingly. She had also a scanty flow from the uterus, and was cured by building up the general health. J. Burns<sup>5</sup> quotes Bailou (*de Virgin., et Mulier. Morbis*, vol. 4, p. 75) as follows: "In young girls and elderly women when the menses are obstructed or irregular, the spleen sometimes swells; and subsides again when the menses become regular." Besides the physiological interest of this observation, it suggests the possibility of such an occurrence misleading the practitioner if great attention was not paid to the history of the case.

7. The results of treatment, some of which have been already noted, are interesting. In the *LANCET* for 1844, besides the report of a case in which an arm became swollen at five successive menstrual

periods, is one in which the vicarious discharge took place from a diseased finger. Amputation was resorted to; the wound healed easily, but there was great determination of the blood to the forearm for several months after. Critchett,<sup>1</sup> in an essay on ulcers of the lower extremity, speaks of vicarious menstruation from them and combats what he says is the prevailing doctrine, viz.: "Restore the healthy function of the uterus and the ulcer will heal." He believes in the converse proposition, "Heal the ulcer and the uterine function will be restored." This view is not borne out by the majority of cases in which the treatment is mentioned, and if we regard the vicarious flow in the light of a safety-valve, it is probable that a transfer to a more dangerous locality might occur if such an ulcer were prematurely suppressed before the natural channel was restored.

8. Before drawing conclusions from this record of cases, I will add for the sake of completeness, that menstruation has occurred after the removal of the ovaries. Goodman<sup>2</sup> collected in 1875, twenty-seven cases of removal of both ovaries, in thirteen of which the patient continued to menstruate regularly. In one it was increased, in one diminished, and in several, irregular sanguineous flows, not counted as menstruation, occurred. A. Reeves Jackson,<sup>3</sup> in an excellent paper upon the doctrines concerning menstruations, gives other instances of menstruation without ovaries. We may now begin to accommodate Dr. Denman by drawing inferences plainly to be deduced from these cases.

1. Vicarious menstruation is not very uncommon, and is, therefore, an important consideration in diagnosis. When females are the subject of hemorrhage from any cause and more especially when the cause is not at once apparent, the menstrual history of the woman should be inquired into with care; and when occurring at the age of puberty, an examination of the genitals would not be amiss.

2. The vicarious or supplementary flow may proceed from any part of the body whatever. The election of the Schneiderian mucous membrane, the lungs and ulcers or wounds in preference to other situations, as well as the anæmia or otherwise deficient condition of the patient's

1. Laycock, *op. cit.*, page 79.

2. *American Medical Recorder*, vol. 3.

3. *American Journal Med. Sci.*, April, 1867.

4. *Northwestern Med. and Surg. Journal*, Mar. 1872.

5. *Midwife*, 1810.

1. *Lancet*, 1848.

2. *Rich. and Louisv. Medical Journal*, Dec. 1875.

3. *American Journal Obstetrics*, October, 1876.

health previously, would lead us to infer that originally weak, or weakened and toneless capillaries were the proximate cause of the phenomenon; especially when associated with a thickened or tough and resisting mucous membrane. The researches of Engelmann, Williams and others as to the change which takes place in the mucous membrane of the uterus during menstruation, show us that some time is required before the capillaries give way. In fact, since the uterine mucous membrane is the thickest in the body, it is not at all surprising that resistance to generally increased vascular tension should be weaker in other parts of the body. If it were not for the prolonged venous stasis in the uterus at this time and the exfoliative changes which this induces in this membrane, it would be the *last* tissue to furnish a hemorrhage instead of the customary one.

3. We should not lose sight of the fact that in cases of suppression of the natural discharge its occurrence in a *suitable* locality is a beneficial circumstance; often relieving grave symptoms of internal organs and preventing serious disease.

4. From the fact that it is not constant in its point of flow, and from the dangers attending menstruation from such organs as the lungs and eyes, attempts should always be made to establish or restore the flow from the uterus as a more suitable, convenient and natural channel. To this end applications to the endometrium are indicated. Chronic and carbolic acids have been employed with good effect, resulting in the exfoliation of casts or shreds of the uterine mucous membrane and probably in its renewal in a better condition. Scarification of the cervix and leeches applied to the groin or perineum have also proved serviceable, mainly as a palliative measure. The general health should also be promoted by remedies calculated to improve nutrition and by tonics.

The occurrence of the hemorrhage has been observed to precede the usual period of the flow by several days, notably in the case of the breasts. This clinical demonstration of the increase in general vascular tension which precedes the appearance of the uterine flow corroborates the researches of Barnes, Goodman and others upon this point, and is of practical importance. In surgical operations, especially near the genitals, when undertaken a few days before menstruation, alarming hemorrhages

from the divided tissues has occurred. This should lead us to be cautious about the time selected for operations upon women, lest if a menstrual period be imminent the flow may be diverted from the uterus and escape from the readier outlet made by the surgeon's knife. This was first suggested and a case in point narrated by Goodwin, in his instructive paper upon the cyclical theory of menstruation,<sup>1</sup> in which he removed a small tumor from the neighborhood of the genitals, six days before a menstrual period, and in which a severe hemorrhage took place within twenty-four hours. Dr. J. H. Pooley at the meeting referred to above, reported a case in which he had operated for *fistula in ano* in a young woman just a few days before an expected period. A small cutaneous artery was cut, which stopped bleeding before the operation was ended. In the middle of the night it began to bleed copiously and was tied. A few hours after, profuse hemorrhage occurred by general oozing from the cut surfaces which was not restrained until the patient had become pallid to the lips and manifested symptoms of syncope when attempting to arise. It is interesting to add that the expected period did not appear, for as the patient remarked, "Where was the blood to come from?" These are the practical lessons suggested by these cases, but they are further instructive by the light thrown upon the nature of normal menstruation as well.

6. They direct our attention away from the pelvic organs as the essential factors in menstruation to the general system, and suggests to us that it is a constitutional rather than an entirely local phenomenon. For, 1st, the womb is clearly unnecessary in the origination or maintenance of menstruation, since the latter occurs from other tissues and when the womb is congenitally absent or has been removed. 2d. Though no one will dispute the importance of the connection between the ovaries and menstruation, it is equally evident that they too are not the sole essential element in the function. For menstruation has occurred when they were rudimentary, diseased, or entirely removed. (For particulars see authors already quoted, Kesteven, Sinedy and Hausmaun and current literature in general upon the subject.) And in one case at least, both the uterus and ovaries were

1. Am. Journal Obstetrics, volume 9.

removed, without influence upon menstruation.

In the presence of these facts, several courses of reasoning are before us. We may imitate the ostrich (not to say Ananias), and say with Leishman,<sup>1</sup> that there is "an invariable and immediate cessation of menstruation when the ovaries have been removed. Or we may say with Schroeder, that menstruation without ovaries is due to habit, which, as Jackson well comments, is merely to reiterate without explaining. Schroeder naively says that this pseudo-explanation is better than to draw a conclusion directly opposed to our views upon the subject. Or we may admit with Laycock,<sup>2</sup> himself a believer in the ovular theory of menstruation, who said forty years ago, in speaking of the periodicity of *evolution*: "We shall find that this periodic movement is not limited to the ovaria, but that it is an affection of the general system in which the ovaria partake." We have no logical escape from the conclusion that the genital organs were not made for menstruation, but menstruation for the genitals, and that the primary impulse is to be sought in either the blood or the nervous system.

The older writers believed that there was a periodical plethora of the blood which modern research does not corroborate. Furthermore, in the case of the Hungarian sisters, the blood vessels were united at the loins, giving them a common circulation, and yet their menstrual period differed.<sup>3</sup> The nervous system still remains, and with this general statement we may for the present remain content. Whether the ganglionic, vaso-motor or spinal nerves are the presiding agency is hardly settled yet with certainty, but it appears most probable that the pelvic nerve-center in the lumbo-sacral cord controls this and all sexual phenomena. The respiratory center of the fetus is quiescent. But when the proper conditions of its action are present, *i. e.*, when the child is born, it straightway acts rhythmically upon the proper muscles. So during childhood the menstrual center is quiescent; but when the ovaries are developed it likewise begins to act rhythmically throughout the woman's sexual life. These views may be thus formulated:

1. Menstruation is a periodical systemic act, in which there is a general increase in

vascular tension and a special determination of blood to the pelvic viscera. It has for its object the increasing of the blood supply of the ovaries in order to ripen Graafian vesicles, and the renovation of the uterine mucous membrane.

2. If the ovaries are removed, the coincident ablation of the peripheral nerve filaments supplying them exerts a trophic or reflex action upon the controlling nerve center, and in many cases causes a cessation of the menstrual impulse, but in some cases does not.

3. If the capillaries of the uterine mucous membrane resist the vascular tension of the menstrual period and fail to rupture, capillaries in other parts of the body may succumb to the strain and a vicarious discharge of blood takes place. When the vicarious hemorrhage is coincident with a uterine flow, we may assume as probable one or more of these conditions. The vascular tension may be unusually great. The capillaries from which issue the supplemented discharge may be unusually weak. The uterine flow may be due to an obstructed condition of its circulation, from pressure upon its veins due to displacement, hyperplasia or tumors and not entirely to the usual and normal causes.

This point is still in need of closer investigation, but we may congratulate ourselves that after centuries of study and numberless theories, we are at last approaching a firmly settled knowledge of the real nature of menstruation and of its many and interesting complications.

1. Midwife, 1st edition, page 96.

2. Op. cit., page 43.

3. American Journal Obstetrics, 1876.