Clinical Observations.

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I.—ABDOMINAL HYDROCELE.

On the 3rd of June last, a child between four and five years of age, the son of a farmer in Berwickshire, was brought to me from the country a distance of about fifty miles, labouring under what seemed to be an incarcerated, if not strangulated, inguinal hernia. It appeared that a rupture-bandage had been worn between two and three years, but that the scrotal swelling suddenly enlarged, with great distension of the abdomen, so as to present a very alarming appearance; although, with the exception of some tendency to constipation, there were no corresponding symptoms of any consequence.

At my clinical lecture I introduced this child, with the intention of dividing the tendinous ring at the lower end of the inguinal canal, in order to prevent the risk of injurious pressure; but, after chloroform had been administered and the muscles were relaxed, I remarked that the abdominal swelling, though very large and tense, like a uterus at the full period of gestation, extending high above the umbilicus to a proportionate extent on each side of the cavity, still left a narrow space, in which the intestines seemed to possess their natural laxity. Upon this ground, coupled with the absence of symptoms denoting strangulation, I at once formed and expressed the opinion that the case was not hernia, but hydrocele.

Lest this view, however, should not be correct, instead of puncturing the scrotal swelling by means of a trocar, I made a small incision through various layers of thickened texture, which showed that the fluid was contained, not in the tunica vaginalis, but in an expansion of the cord; and I evacuated a large quantity of serous effusion. Then introducing my finger, I found that the state of matters was what had been suspected, although the abdominal part of the swelling remained unchanged. I accounted for this by attributing it to the effect of pressure by the bandage, and proposed after a while to puncture through the parietes of the abdomen. But, in the course of two or three days, the fluid began to drain away from the scrotal aperture, at first clear, and then slightly turbid with lymph; the child at the same time being slightly feverish, while the tumour gradually diminished. On the 24th of June he returned home, where, I learn from his medical attendant, he is now running about quite well.

Lectures

ON THE

DIAGNOSIS AND TREATMENT OF DISEASES OF WOMEN.

DELIVERED AT ST. MARY'S HOSPITAL MEDICAL
SCHOOL.

BY

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GENTLEMEN,—The next series of data the diagnostic signification of which it is proposed to examine, are those relating to the variations and alterations in the performance of the function of Menstruation, and which constitute the

DISORDERS OF MENSTRUATION.

With the subject of menstruation, a very considerable portion of the pathology of the diseases of women is intimately connected. The decision with reference to the curative or other treatment to be recommended is in almost every case greatly influenced, modified, or even altered, by the nature of the data afforded by an examination into the condition of this most important function. Further, a very considerable portion of the disorders to which the female sex are obnoxious depend upon altered and morbid conditions of the generative organs; and in all of these the menstrual phenomena are subject to deviation from the healthy standard, and thus present us with a series of symptoms of great value in the determination of the nature of these various maladies. The variation in the quantity, periodicity, etc., of the menstrual secretion, usually spoken of as substantive diseases, and treated as such, constitute of themselves the great bulk of the cases brought under the notice of practitioners in this branch of the profession. Women themselves, and rightly too, attribute a great degree of importance to "irregularity", of whatever kind, experience having shown them how intimately dependent is their general health on the maintenance of the menstrual function in its healthy physiological state.

The due discrimination of the varying conditions which commonly pass under the name of "menstrual disorders" is one of the most important points to which those who are desirous of treating the diseases of women with success can direct their attention. In very many cases, these disorders are simply evidence of general indisposition; or, at all events, they are such as can only be successfully treated by general remedies, and to distinguish these from others in which the seat of the derangement is more entirely local, and which are only appropriately combated by measures of a more direct and local character, requires great care and judgment.

A few remarks concerning the

NORMAL PHYSIOLOGICAL PHENOMENA OF MENSTRUATION,

Will usefully precede a discussion of the deviations from the healthy standard so frequently met with.

It is necessary, indeed, to know what the rule is, before considering the deviations from or exceptions to that rule.

The process known under the names "menstruation", the "catamenial discharge", etc., is one for the production of which two organs are essential—the uterus and the ovary. Menstruation is an indication of the fact that the ovaries are in activity—in other words, that ova are being formed, and developed or matured in the ovaries. By "menstruation" is meant a periodical discharge of a sanguineous fluid from the uterus, this discharge being attended with an engorged or congested state of the uterus, ovaries, and adjacent organs, and in most cases by hyperæsthesia of the parts in question, and disturbances of various kinds and degrees of other functions of the body. It is, in a certain sense, analogous to the *œstrus* in the lower animals, the presence of menstruation being an indication that the woman is capable of being impregnated; but the woman differs from these animals in this respect, that she is capable of being impregnated, not at the time during which the discharge itself occurs only, but also during the intervals between the periodic discharges. Menstruation is regarded by some writers as an accident, so to speak, of ovulation—as a simple consequence of the congestion of the generative organs, and in which the uterus shares, attendant on the maturation of the Graafian follicles in the ovary, the sanguineous fluid escaping from the inner surface of the uterus, as a consequence of the inordinate engorgement of this organ. There is no doubt, however, as to the existence of a certain alteration of the mucous membrane of the uterus during menstruation, attended in many instances, it may be in all, with a complete separation or shedding of this membrane, as the researches of Coste and others have shown; but what the exact nature of this change may be is still somewhat a matter of doubt. In the case of a woman who, while menstruating, died in St. Mary's Hospital after an operation for hernia, and whose uterus I had an opportunity of examining, the mucous membrane was greatly thickened; and the cavity of the uterus appeared, when a section was made, to be lined by a deeply red, soft, and spongy structure, on the surface of which were visible the orifices of the utricular glands. Similar appearances have presented themselves to other observers. There is abundant evidence to show that the discharge, when really menstrual in character, and not due to pathological conditions, is dependent in some way on ovulation; but ovulation is not always accompanied by menstruation, as is proved by the fact that women have been known to conceive and bear children in whom menstruation has never occurred.

There are many subjects connected with an inquiry into the physiology of ovulation and its relations with menstruation, which cannot be entered into here, which will be found, however, discussed by Dr. Tyler Smith, in his *Manual of Obstetrics*, and by Dr. Farre, in his admirable treatise (Article "Uterus", *Cyclop. Anat. and Phys.*).

The age during which the catamenial discharge occurs is open to certain variations; but, as a rule, it begins between the ages of 14 and 16, and ceases between the ages of 40 and 50. For about thirty years of the woman's life this discharge is periodically observed. With reference to the age at which

it commences, we have observations by Robertson, Whitehead, Briere de Boismont, and more recently by Szukits. Further, I have records of 358 cases observed by myself.

The mean age in 4000 cases referred to by Whitehead was 15 years 6½ months. In 2169 cases collected by Robertson, Lee, and Murphy, the mean age was 14 years 11 months. Szukits found the mean age to be, in 665 women born in Vienna, 15 years 8½ months; and in 1610 women born in the country, 16 years 2½ months, which result, as regards the influence of town life in hastening the first appearance of the catamenia, agrees with that arrived at by Briere de Boismont in Paris. The latter observer states that, amongst women belonging to the upper classes of society, the average age of commencement was as early as 13 years 8 months. Although the age 14-16 is the most common, yet there are numerous exceptions to this rule. In Robertson's 450 cases, ten began to menstruate as early as 11 years old, and nineteen at 12. The youngest of Szukits' cases was, in the town class 11 years, and in the country class 10 years old. In three out of 358 cases noted by myself, menstruation began at the age of 10 years. The largest number of my own cases, 73 out of 358, menstruated first at the age of 14.

The mean age of the commencement of the catamenia appears to be about two years earlier in the warmest climates. Thus in India the mean of 597 cases collected by Robertson was 13 years. It was formerly supposed, on the assertions of Montesquieu and Haller, that Hindu women began to menstruate, as a rule, at 8, 9, and 10 years of age; but the facts collected by Robertson conclusively show the incorrectness of this opinion. It does appear, however, from Robertson's tables, that the "proportion of Hindus who arrive at puberty at the ages of 12, 13, and 14," is far greater than is observed in the women living in our own temperate country. This early arrival of the catamenia is attributed by Robertson to the influence of race—to the circumstance that for many generations (upwards of three thousand years) it has been the custom of these people to give their daughters in marriage immediately on the arrival of puberty. This custom has, in Robertson's opinion, produced and perpetuated a kind of "family peculiarity". Whether we consider, with the author in question, that the difference in this respect is dependent on "race", or, with Montesquieu and Haller, that "climate" is its determining cause, the fact remains, that in India menstruation first appears somewhat earlier than in England. The inquiries of Mr. Robertson seem to show that, with respect to other countries, the age at the first appearance is almost identical with that in our own country. The inhabitants of colder countries than England do not, on the same authority, afford evidence in proof of the popular opinion that menstruation is with them notably retarded.

The latest age at which the catamenia may commence is open to great variations; but, as a rule, it is not postponed beyond the age of 18. Briere de Boismont found that, out of 359 "femmes de la capitale", twenty began to menstruate at 18 years, six at 19, five at 20, two at 21, four at 22, and two at the age of 23. The latest age given by Robertson is also 23. Szukits gives the age of 22 as the latest at which the first appearance occurred in the Vienna

class; but of those from the country, one woman began to menstruate as late as 25. The latest age in my own series was 24. In a case quoted by Meissner, the catamenia first appeared at the age of 42. (Meissner, *Frauenzimmerkrankheiten*, II, p. 741.)

The cessation of menstruation occurs in the majority of cases between the ages of 40 and 50. The number of cases in which the cessation takes place before 40 is greater than the number of those in which the final appearance of the catamenia occurs after the age of 50. (Brierre de Boismont.) There appears, however, to be a great diversity in the results obtained by various observers on this point. Thus in the cases, 181 in number, of the author just quoted, the age at which the final cessation most frequently (18 out of 181) occurred, was 40; while in Robertson's cases, 77 in number, the greatest number (26 out of 77) occurred at the age of 50. The majority of the cases observed by Szukits ceased at 46-50. The earliest period at which the cessation may take place is shown by the following recorded facts:—Of Brierre de Boismont's 181 cases, the cessation was noticed in 7 before the age of 30, the earliest being at the age of 21. The earliest of Robertson's 77 cases was at the age of 35. Szukits gives 2 cases at the age of 30.

Perhaps the most interesting class of facts in connection with this subject has reference to the latest age at which menstruation may occur. There is very little doubt that some of the cases related as cases of late menstruation are not cases of menstruation proper at all; the utmost that can be allowed is that occasionally a discharge, sanguineous and periodic, may be present at a very late age. Gardieu relates the case of a woman said to have been "parfaitement réglée" at the age of 75. Up to the age of 55 there are a sufficiently large number of cases; but after that age true menstruation is exceedingly rare. Brierre de Boismont gives 5 after the age of 55, out of 181, one being as late as 60. Robertson (*Op. cit.*, p. 185) gives 4 out of 79 as occurring after 55, two of which were at the age of 60, and one as late as 70. Lastly, Szukits gives one case (the latest) at the age of 60. The question as to the age at which menstruation ceases is connected with another very important one, namely, the latest age at which conception may occur; when the menstruation ceases, as a rule, the liability to impregnation also terminates. The latter question has been already discussed.

In reference to many of the foregoing statements, it must be remembered that many of the exceptions to general rules quoted were probably exceptions due to the existence of a pathological element.

Menstruation ceases earlier in India; but everywhere the duration in years is much the same. For about thirty years menstruation continues. Robertson is of opinion that early cessation is chiefly noticed in those cases in which the function has been established at an early period. In most of those cases, however, in which the function continues to be exercised up to the age of 53 or 54, the period of commencement has not been unusually late; in such cases, the menstrual life far exceeds the average term of thirty years.

Periodicity. The usually accepted statement is that the time included between the day of the appearance of the discharge until the corresponding subsequent day is twenty-eight days—a lunar

month; but the difference presented by individual cases in this respect is so great as to show that any rule generally applicable must have rather a wide range. Many women menstruate regularly every three weeks; and a less number menstruate every calendar month or a little over. In another class of women there is great irregularity, the period varying from time to time consistently with health. It is only, then, in the majority of instances that menstruation occurs every lunar month. There is often evidence of a family peculiarity in respect to the menstrual period being transmitted from one generation to another.

Number of days during which the discharge continues. In 562 cases examined by Brierre de Boismont, the discharge continued 8 days in 172 individuals; the number of days next frequently observed was 3; the next 4. The conclusion arrived at by this author was that the menstrual flow continues longer in towns than in the country; and longer in small, delicate, nervous women, than in those who are tall, robust, and of a sanguine temperament; longer also in those who lead a sedentary, easy, voluptuous life, than in those who follow active occupations, whose diet is conducive to health, and whose manners are regular. (*Loc. cit.*, p. 142.) In women who are beginning to menstruate, the discharge lasts generally a short time for the first few months, its duration increasing subsequently. The time during which the discharge continues is, in general terms, three to seven or eight days; but the observer must be prepared to meet with great variabilities in this particular.

Quantity. Late observers (Magendie excepted) consider the typical quantity of sanguineous fluid which is lost at each period to be three to four ounces, or even less than this. (Farre, *Cyc. An. and Phys. Art. Uterus*, p. 663.) The older estimates considerably exceeded this in amount. The quantity appears to be greatest about the middle of the period in the majority of cases. Sudden cessation for some hours together, followed by copious discharges, whether accompanied by coagula or not, are abnormal; for when there is no impediment the flow continues persistently and uninterruptedly, though it may be more in quantity at one time of the day than another.

Quality of the fluid discharged. The researches of Dr. Whitehead, Donné, and others, have conclusively shown that the discharge observed is really composed of blood; and that when obtained immediately from the uterus, and before it has been subjected to the action of the acid mucus of the vagina, it is coagulable just as is ordinary blood. Ordinarily, as it flows from the vulva, it has acquired an acid reaction, and is no longer coagulable. For the first few hours the discharge is paler, it then becomes of a deeper red, and again appears of a lighter colour as it is about to disappear. The odour of the menstrual secretion is peculiar; formerly extraordinary effects were attributed to it, which it is unnecessary to enumerate here. The varying qualities of the vaginal and cervical secretions have probably more influence in altering the qualities of the menstrual fluid itself than any varieties of the fluid itself as it exudes from the uterus.