AN INAUGURAL DISSERTATION
ON
Signs of Pregnancy
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Signs of Pregnancy

It sometimes becomes a matter of the gravest importance to determine in a given case whether pregnancy does, or does not exist, and occasionally consequences vital to the interest of the patient hang upon our decision. We may be appealed to by injured innocence to avert the fatal shafts of calumny, or guilt may seek our aid to hide from public view her secret enormities, and as the safest way to accomplish her object, endeavor to impose upon us the belief that she is slandered. An unmarried woman of previous good character, for example, is suspected of being pregnant, and the vindication of her chastity requires the
verdict of a medical man that she is not, and we are called upon to decide the question. If we pronounce her pregnant when in truth she is not, who does not see the stupendous injury we inflict upon her? Robbed of her character for chastity, in all civilized countries woman falls from the high sphere in which she was designed to move into the very depths of degradation and disgrace. Whether just or unjust, the conventional law of society against unchastity in the female, whilst it scarcely more than condemns the same crime in the other sex is rigid and inexorable to the last degree. Hence the absolute necessity in such cases that we be positively certain of the truth of our diagnosis before we venture to pronounce the woman pregnant. On the other hand, should we pronounce her not pregnant when in truth she is,
we may not only shield crime from its merited retribution, but encourage the perpetration of the still more flagitious crime of intentional abortion or infanticide.

But this is not the only light in which the subject under consideration is an important one. In many countries pregnancy is very largely considered a cause why the execution of capital punishment should be delayed; and our opinion might be required in a case of that character.

And again the disposition of property may depend whether a woman be pregnant or not. These cases are difficult and perplexing to the last degree, for many of the signs of pregnancy are of such a character that we cannot arrive at a knowledge of their presence or absence, except through the patient's representations, and if she have any motive to deceive, of course her...
statements must be received with extreme caution. But not only is the subject an important one in a medical-legal point of view, but in the treatment of disease the presence or absence of pregnancy will have an important bearing on the measures we adopt. What might be very proper and necessary in an unimpregnated woman, might be very improper and dangerous in one who is pregnant. Cases of this character will very readily suggest themselves to the mind of the intelligent reader, and I need not therefore enlarge upon this part of my subject; and without further circumlocution I will proceed directly to the consideration of my subject proper; and as the ordinary limits of a thesis will not allow me to discuss it fully, I shall only mention the more important signs, referring the reader to systematic works.
for fuller details of the subject.

Suppression of the menses. If the patient has no motive to conceal her pregnancy, the suppression of the menses may be regarded as an important sign. But if she has, it will be as difficult to ascertain whether she still menstruates or not, as to determine the existence or non-existence of pregnancy itself; since we have to rely solely on her statements. If, however, she professes to laboring under amenorrhea and there be no visible signs of ill health, the symptom is of sufficient value to raise in our minds a suspicion of pregnancy, although it is insufficient per se, even when certainly ascertained, to form grounds for a positive diagnosis, as will plainly appear from the three following facts. 1. Women have continued to menstruate through the whole term of pregnancy. 2. Women have borne
Children who never did menstruate. Amenorrhea may result from many causes totally unconnected with pregnancy. Hence it is necessary that we consider this sign in connection with others in order to derive its full value. In the case of married women the suppression of the menses if not followed by any sign of ill-health, may be looked upon as a pretty certain sign of pregnancy. We must not forget however that there are probably but one or two infallible signs (to be mentioned hereafter) of the presence of a fetus in utero, and when reputation or property is at stake be very guarded in our diagnosis. It sometimes happens that the menses are retained behind a stricture or adherent condition of the vaginal walls or by an imperforate hymen, and their accumula-
then in the uterus may give rise to most of the symptoms of pregnancy and thus subject the patient to unjust suspicion. Such cases are by no means uncommon. There are other sources of fallacy in connection with this symptom. Girls have been known to stain their linen at the return of the regular menstrual period in order to keep up through the whole period of pregnancy and through the process of delivery without detection, unless the patient was assisted by her friends. Remembering these and other sources of fallacy the sign under consideration is one of much value.

Nausea and Vomiting.

The stomach is pretty generally involved in the wide range of sympaties awakened in the system by the chang gungon
in the uterus, and hence we have nausea and vomiting during pregnancy. It may commence at the very moment of conception, but is most generally deferred for two or three weeks, or perhaps as many months. In some persons it does not occur at all. But nausea and vomiting may result from causes totally unconnected with pregnancy, and it would therefore be very rash to conclude from this sign alone that the woman is pregnant. He may generally be able by an attentive examination to distinguish between the nausea and vomiting produced by pregnancy and that which is the result of other causes. In pregnancy this symptom is not usually connected with any other sign of ill health, whereas if it depends upon some other cause a careful investigation will detect it. When it depends upon pregnancy
it is very apt to come on in the morning, and is hence called morning sickness. This is however not always the case. The nausea generally comes on suddenly, perhaps while the woman is eating, and she scarcely has time to retire before the contents of the stomach are ejected, and then she feels as well as ever. Sometimes this symptom becomes so distressing that the patient is unable to retain any thing on the stomach long enough to derive proper nourishment, and may be threatened with death from inanition. This however is rare. This like the symptom just considered is alone inconclusive and only adds to the probabilities of the existence of pregnancy.

Salivation.

The sympathy which excites nausea and vomiting sometimes extends
to the salivary glands and produces profuse salivation. This symptom has been noticed since the days of Hippocrates and is known among the common people of this country as "spitting cotton." It does not occur with sufficient certainty to make it a very valuable sign, but when it does occur, if it cannot otherwise be accounted for, it may be regarded as adding considerably to the probabilities of the existence of pregnancy.

Changes in the Mammae

Soon after conception the woman begins to be sensible of certain changes going on in the breasts. She experiences some pain and a stretching fullness commencing about the nipple, at the same time the breasts begin to grow in size and become fuller and harder, the circle around the nipple changes in color and
other characters constituting what is termed the areola. As gestation advances milk begins to be secreted. There is considerable difference as to the period at which these changes occur. In some coming on soon after conception and in others being deferred till the end of gestation. We may however expect pretty uniformly to find the greater number of them present at the end of the second or the beginning of the third month. It must not be forgotten that these changes may occur from causes unconnected with pregnancy, except perhaps the areola. The breasts sometimes enlarge simply from cohabitation, or it may be caused by the retention of the menses within the uterus, or by any other cause capable of distending the womb. Of all the signs afforded by the breasts
Competent judges assert the areola to be the most reliable and many eminent men have held it to be infallible. What are the changes of the true areola?

At the risk of being tedious we will answer the question by an extract from an eminent author. The color at the period of two months is little more than a deep shade of rose or flesh color slightly tinged with a yellowish or brownish hue.

During the period of the next two months all the changes are perfected or nearly so, and it then presents the following characters: a circle around the nipple, whose color varies in intensity according to the peculiar complexion of the individual, being generally much darker in persons with black hair and dark eyes than in those of fair hair, light-colored eyes and delicate complexions. This circle varies
in extent from a diameter of an inch, to an inch and a half and increases in some as pregnancy advances, as does also the depth of the color, in the center of the circle the nipple is observed partaking of the altered color of the part, and appearing turgid and prominent, and that part of the areola immediately around the base of the nipple has its surface rendered unequal by the prominence of the glandular follicles, which varying in number from twelve to twenty project from one sixteenth to an eighth of an inch; and lastly the integument covering the parts is observed to be soft and more moist than that which surrounds it and at the same time the breasts are observed to be full and firm at least more so than was natural to the person previously.” According to Hunter Montgomery
and others if all these characters exist in the areola they are all most a certain sign of pregnancy but probably any one of them and especially the one most generally relied on viz color may be wanting and still the woman prove pregnant. It must also be remembered that the breasts of a woman recently delivered will present characters scarcely distinguishable from those of one during pregnancy and furthermore this state of the areola is kept up to a considerable degree during the nursing period. We might greatly extend our remarks upon this part of the subject but our limits admonish us to desist.

Secretion of Milk

The presence of milk in the breast is properly considered a conclusive sign of pregnancy but...
nothing could be more erroneous since it has often occurred under circumstances that preclude the possibility of the existence of that condition. It has occurred in children of eight years of age and often the decline of life from the application of children to the breasts. Dr. Dunglison mentions a case of a negro man who suckled the children of his mistress. It sometimes happens that women continue to secrete milk for a considerable time after weaning their children and the records of medicine furnish one case in which this continued fourteen years. It may depend also upon morbid changes going on in the womb especially such as tend to distend it as phymetra polypus. Nevertheless, when found to exist with other signs especially if the woman has
never been pregnant before it will go a great way in establishing the existence of pregnancy.

Quickening

It is popularly supposed that the fetus is first endowed with life at the moment when the mother first feels its movements in the visible and it is strange that in many civilized countries the law should sanction absurd motion. Quickening usually begins about the end of the third or the beginning of the fourth month sometimes later and sometimes earlier. When it does occur and especially if at the same time the womb suddenly rise out of the pelvic cavity the woman usually experiences a considerable degree of nervousness which may end in faintness or even complete syncope after which
She feels a slight fluttering sensation which goes on to increase till she distinctly feels the motion of the fetus. The motions of the fetus are not only perceptible to the mother but may usually be felt by the physician on placing his hand on the abdomen, especially if the hand be first dipped in water. This sign, like the proceeding, is not infallible. Women often think they feel the motion of the child when they are not pregnant. It is said moreover, that some women, by the action of the abdominal muscles, can so closely simulate the movements of the fetus as to “deceive the very elect.” For these reasons this cannot be regarded as a positive sign of pregnancy.

Enlargement of the womb
Since enlargement of the abdomen may arise from various causes other than pregnancy, of course its presence unexpected by other circumstances of that condition is not entitled to a great deal of weight. It may be the result of morbid processes going on in the uterine cavity, ovaries or other visera or it may be the effects of abdominal dropsy. We may be assisted in placing a proper estimate upon this symptom by the length of time it has existed, the patient's general health, the size of the uterine tumor or not.

During the first two months of pregnancy there is no perceptible enlargement of the abdomen although the uterus is enlarged but being still a pelvic organ it does not encroach upon the abdominal space. But towards the
end of the third month enlargement begins to be seen and continues to keep pace with pregnancy till towards the close of pregnancy. During the fifth month the depressed condition of the navel begins to diminish until it comes to a level with the surrounding surface and finally in most persons protrudes beyond it.

If the enlargement proceeds from a gravid uterus and a woman be four months or more advanced by placing her in the proper position the outlines of the womb may generally be felt through the abdominal walls and if upon vaginal inquiry we find the cervix and os uteri undergoing the changes incident to pregnancy and the woman's character and her general health do not contradict the
fact, we may safely pronounce her pregnant. If the swelling depends upon some morbid process we will be admonished of the fact by the general history of the case the length of time the growth has existed and the health of the patient. Much more might be said upon this part of the subject but our limits forbid us to extend our remarks.

Balottement

This mode of inquiry is to be instituted in the following manner, one or two fingers are to be introduced into the vagina and carried up until they come in contact with the anterior aspect of the cervix uteri and as high up as the finger can be made to reach and kept in that position while the other hand is press upon the uterine tumour in a direction towards
the cervix. At the instant of doing this the finger must be quickly impressed against the neck of the womb and still remain in contact with it and a sensation will be felt as of something sounding away which in a moment will return with a gentle pat. It is best performed while the patient is in the upright position or with her shokut very much elevated. This sign is only valuable from the end of the fourth to the end of the sixth month. Before that time the fetus is too light to be thus detected and after and after that time its increase of size will not admit of its thus floating about. When present it is decisive of the existence of pregnancy and is as applicable to a dead fetus as to a living one.
Sounds of the Fetal Heart

After the fifth month of pregnancy by applying the ear or stethoscope to the abdomen of the mother one may be able to discover the sounds of the fetal heart beating at the rate of from 140 to 160 beats a minute being much more rapid than the pulse of the mother and thereby distinguished from the pulsations of her abdominal arteries. It is most generally compared to the ticking of a watch under one's pillow. It is very quick when first discoverable but grows more slow and stronger as pregnancy advances. When one has heard of course it departs all doubts as to the existence of pregnancy. Its value however is much depreciated by the fact that one cannot avoid ourselves of it in that stage of pregnancy most obscure by doubt.
and we cannot always detect it even in the later months and of course it
presupposes if the child be dead. It is usually
most distinctly heard at a point midway between the umbilicus and the antero-
inferior spinous process of the ilium and
most frequently on the left side.
Placental Squele as it is usually
termed is dwelt upon by all modern
writers on the subject. The mode of its
production seems to be an unsettled question
some referring it to the motion of the blood
in the placenta while others make its
site in the uterine sinuses whilst another
class contend that it is produced by
the pressure of the gravid uterus upon
the iliac arteries of the mother.
Whatever be its source it is clear from
the statements of all that it may be
so closely simulated by pressure of any
kinds on a large artery as not to be extinct quishable from it, and hence, it is of very little value I may therefore be allowed to dismiss it without further consideration.

Having in as concise and clear a manner as I am capable of, touched upon the most important points of my subject I will remark by way of closing that my greatest difficulty in this essay has been not to find matter for it but to make a judicious selection of such facts as are most important. If it shall be found that I have chosen of trivial moments and passed by others of more importance, I trust my inexperience will furnish a sufficient excuse for my neglect.

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