

AN
INAUGURAL DISSERTATION

ON

Diagnosis of Pregnancy

SUBMITTED TO THE

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BY

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To

John M. Watson. M.D.

Professor of obstetrics and
Diseases of Women and children

This Thesis is most respect-
fully inscribed, as a testimony
of the high regard in which
his superiority as a teacher
is held by his pupil.

The Author.

Diagnosis of Pregnancy. 1

How shall it be known when a female is pregnant? is a question among the common people of but little moment, it is only necessary for them to see a female, with a considerable protuberance of the abdomen to pronounce her enceinte.

Not understanding, or not knowing anything of the innumerable pathological conditions, to which the female is liable, they have no clue whereby they are enabled to distinguish between any one of these pathological derangements and a regular physiological pregnancy; but in the history of the practitioner of medicine, there are or may be instances arising requiring him not only to under-

stand each and every one of these morbid derangements, but also to be able to bring them to bear in their relation to pregnancy.

Then the question how may it be demonstrated when a female is pregnant; is one which may well engage the attention of the young practitioner, and urge him to study well, the anatomy of the female organs of generation in their normal condition, before they have taken on that physiological condition, natural to their development by the product of conception.

The signs of pregnancy are numerous, and may be divided into the Rational and Sensible signs. The first or rational symptoms are

those, which, by their influence in producing perceptible changes in the moral and physical character of the female, may give us some reasonable grounds for suspecting pregnancy.

The first in the list of these symptoms, may be placed the suppression of the menses, the monthly flow of which is one of the natural physiological phenomena of the healthy female after arriving to the age of puberty; but as there are numberless pathological conditions which would cause a cessation of the menses, and as there are numerous instances put on record, by the most distinguished obstetricians, of females menstruating during their whole term of gestation; and also instances of women being

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regular in menstruating only when pregnant, we are constrained to believe this to be quite a fallible sign.

There are circumstances, nevertheless under which we may place some reliance on this symptom; for instance a female in whom there are no morbid symptoms, nothing to indicate any pathological derangement of the system, who had previously had her menses regularly and physiologically; for such a woman to cease menstruating and that cessation not to be followed by any derangement of a serious nature, in such an instance we might conclude, that we had one of the normal symptoms of pregnancy and a tolerably firm basis for our suspicions. But even

in an instance of the above, we should be guarded in our diagnosis, and search after other collateral signs before being too sanguine that the cessation of the menses was due to the development of the womb by the product of conception.

About the same time that the cessation of the menses take place, there is a phenomenon of a seemingly pathological character, which occurs in the digestive apparatus going to strengthen the previous symptom to no inconsiderable degree; such as nausea and vomiting early in the morning or on rising from bed, vomiting her breakfast, usually to the great annoyance of the female; a considerable change in the dispo-

sition of the female is perceptible, becoming generally much more irritable and petulant than usual; these are generally symptoms of the pregnant state, but they may likewise be brought about, by an unhealthy action of some of the organs of the system, and even with all of the foregoing symptoms we might be deceived in our diagnosis.

The symptoms developed, by the variations produced on the belly of the enceinte female, are well worthy our attention in diagnosing a case of pregnancy. But these symptoms vary greatly in different females; for the projection of the abdomen is greater in some women at five months, than in others at seven and

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eight months, which variation is due to difference in the stature of the different women, as well as to the variation in the pelvic excavation, and difference in the projection of the vertebral column. In the first month the uterus settling down in the excavation, the abdominal walls may become more flattened than before impregnation of the Ova. The uterus rising above the superior strait about the third month, the increase in the size of the abdomen becomes perceptible to the eye, and unless some pathological strangement supervenes the enlargement regularly increases until the end of gestation. The modifications, produced on the umbilical depression, by the change of position and relative enlargement

of the womb considerably increases the value of our rational diagnostic symptoms; the umbilical depression appears more sunken at first, owing to the descent of the uterus into the pelvic excavation, the muscles being drawn tense; on the rise of the womb the depression becomes less; about the sixth month it is on a level with the surrounding parts, and towards the close of pregnancy the umbilicus is considerably protruded beyond the surrounding region. These modifications may be produced by several abnormal conditions of the female; a uterine tumour may so enlarge and develop the womb, as to cause similar phenomena, which could only be diagnosticated from the physiology of pregnancy by

The absence of other valuable symptoms which would be present, were the foregoing phenomena produced by the development of a fetus in utero.

Hunter and some other writers consider the modifications which the Mammæ undergo as unmistakable evidence of a fetus in utero, indeed so constant are the phenomena of the breast, that women who have borne children, hesitate not to declare themselves pregnant whenever such phenomena are present. The modifications of the breast make their appearance in quite an early stage of gestation; during the first month the Mammæ become enlarged and flaccid, and tender to the touch; this seemingly pathological

action set up through the sympathetic relation existing between the womb and the mammae, is in a short time considerably modified, the swelling and tenderness becoming less perceptible. About the beginning of the third month a kind of dark ring or areola, (considered by some as a Pathognomonic sign): is formed around the nipple; at first small but gradually enlarging according to the period of gestation; within this ring are developed some small glands, peering up above the surrounding surface; these glands secrete a kind of sero-lactescent fluid which may be caused to ooze out by pressure, indeed either spontaneously or from the weight of the clothes covering the

bosom, the fluid from these small glands, continually dribble out and keep the clothes and breast of the female moist. These phenomena considered by some able obstetricians as infallible signs, of pregnancy may prove inadequate, and we are compelled from the observation of other as eminent writers, to consider them as valuable, but not as infallible in every instance; for experience teaches that though they may be greatly relied on in primiparæ, yet in multiparæ, most of the phenomena may be owing to former pregnancies, and we even have accounts of primiparæ going through their whole term of gestation, without their mammae having undergone any

of the usual modifications, but such instances are certainly exceptions to a very general rule, and we should consider the modifications and changes of the breast as very valuable symptoms, in our search after the little stranger's presence.

The modifications of the urine in pregnant women, are thought by some to be sufficient evidence of a fetus in utero; but owing to the difficulties and delay requisite to bring to bear, the contrast existing between the urine of pregnant woman and those who are not, we are generally debarred the useful information that might be gained from that source. All of the foregoing phenomena going on in the system of the apparently healthy female, would produce

a sum of probabilities amounting almost to a certainty, that the uterus was being developed by the product of conception; and where there was neither character nor reputation at stake, we would be justifiable in asserting the pregnancy of a female without further examination; but there are instances in which not only the reputation of the practitioner, but the character of the woman is depending upon our diagnosis; therefore we should continue our examination and endeavor to substantiate the foregoing rational signs, by diagnosing some of the sensible signs of pregnancy; signs which are discovered either by the sense of touch or by auscultation; symptoms ren-

dered valuable to the practitioner according to his experience in putting them in practice. There are several varieties or modes of putting the touch in practice, either by a vaginal exploration by abdominal palpation or by ballottement. In making the vaginal exploration with the finger, we find quite a change in the uterus during pregnancy, from what existed during its unimpregnated state; the neck of that organ becomes somewhat elongated and enlarged; the tissue of the neck becomes softened; the ostium which before conception was a mere fissure, becomes more patulous and the finger can with less difficulty be made to traverse the whole interior of the neck; by some the cervix uteri

is thought to become regularly shortened during the whole term of gestation, others suppose the effacement of the neck to take place very late in pregnancy, the fibres of which go to enlarge the cavity of the uterus. After the uterus has risen above the superior strait the abdominal palpation, may be practised with advantage to the accoucheur,

The woman being placed in a horizontal position with her chest and hips flexed in order to relax the abdominal muscles, the tumour caused by the development of the uterus, is to be felt for over the surface of the belly; the tumour thus discovered may be diagnosed from a pathologic enlargement of the womb, by the regularity and evenness of its surface

and by the flexibility of its walls.

But the tumour is not the only per-
sible sign developed by palpation, the
active movements of the foetus may
likewise be perceived under the hand.

From the fourth or fifth month on-
ward, the movements of the foetus, prove
to the woman herself, that her womb
is being developed by the product of con-
ception in most instances of pregn-
ancy.

The third mode of practicing
the touch is by ballotement; which
may be practiced with the woman
either in the erect or horizontal position.

The woman being in the erect po-
sition, her body leaning forward, the
presence of the foetus may be detected,
by placing the palm of one hand over
the fundus uteri, and the index finger

of the other hand, being applied to the lower portion of the womb, and suddenly pushing the womb upward and forward; the fetus will be bounded upward in the amniotic fluid, and will be easily detected when it falls back on the fingers.

By auscultation the sound of the foetal heart is brought to bear as a sensible sign of pregnancy; the pulsation may be perceived after the fifth month and in some instances prior to that time; these sounds are not isochronous with the pulsation of the maternal heart, and may be compared to the ticking of a watch wrapped up in a napkin.

There is also another sound perceived which is synchronous with

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The pulsations of the mother's heart, and is supposed to be produced by the placental circulation; these sounds being heard in conjunction with the other collateral signs of pregnancy, we may no longer doubt our diagnosis, in pronouncing the pregnancy of any female; for should all of the rational and sensibler signs ~~of~~ said down above take place in the history of any female, and she not be in the pregnant condition, there would undoubtedly have taken place in her system, a pathological condition of unheard of phenomenon and singular notoriety.