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## THE DIAGNOSIS OF PREGNANCY DURING THE FIRST THREE MONTHS.

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It is a current belief among the profession, which is supported by the authority of obstetrical text-books, that the diagnosis of pregnancy during the first three months is difficult or impossible. It is the purpose of this communication to combat this teaching. In my judgment, a practitioner skilful in making the bimanual examination will be able, ninety-nine times out of a hundred, in cases of suspected pregnancy, between the sixth and twelfth weeks, to definitely determine whether or not pregnancy exists. This statement is based upon ten years' experience. During this time a very large number of such cases have come under observation. My opportunities for seeing cases of early pregnancy have been unusual. During the first five years of my practice I was connected with the dispensary of the Philadelphia Lying-in Charity, where at that time large numbers of women (mostly illegitimately pregnant) came for the purpose of ascertaining whether or not they were pregnant. Thus my attention was early called to the critical study of this subject. During the past five years I have seen the usual number of cases which come to one in charge of a large hospital service for the diseases of women, in addition to those seen in private practice. While no notes have been kept of the total number of cases seen, it is apparent that the number is quite a large one. My reason for referring to this fact is that it gives emphasis to the statement that, of the total number of patients seen in which a diagnosis of pregnancy was arrived at, I know of not a single instance in which the element of time did not bear out the

correctness of the opinion. Of the cases seen, of course, there were certain ones in which a diagnosis was reserved, owing almost invariably to the extreme development of fat, which interfered with a satisfactory bimanual examination. I think, however, that one per cent. would cover such cases.

The one sign above all others which establishes the existence of pregnancy during the first three months is dwelt upon little, or not at all, by obstetrical text-books. My attention was first drawn to this sign by an article written by Grandin, of New York, it being called the sign of Hegar. Dr. Grandin and others were wrong in naming it as Hegar's sign, but they were entirely right in estimating it as a thoroughly reliable evidence of pregnancy. The shape of the unimpregnated uterus is pyriform, flattened from before backward. When the cavity of the womb is occupied by a growing ovum certain changes in the form of the womb and in its structural peculiarities rapidly ensue. As is well known, the corpus and fundus of the womb develop with great rapidity, in order to make room for the growing ovum, while, on the other hand, the cervix grows more slowly, and even toward the end of pregnancy its size has not greatly augmented. Within six weeks after the beginning of pregnancy the ovum has grown sufficiently to cause the corpus and fundus of the womb to assume a distinctly spheroidal shape. As during this time the cervix has altered very little in its form, we have present, to make use of geometrical terms, a spheroidal body posed upon a cylinder. If one will picture this state of affairs he will see that the sphere juts out from the cylinder prominently and in every direction. In other words, when examining the pregnant uterus between the sixth and twelfth weeks, the uterus will be found enlarged to correspond with the period of the pregnancy; the corpus and fundus will be found as a spheroidal body, and the corpus can be easily made out as jutting boldly out from the cervix in front, behind, and at each side. In my experience this sign is of the utmost value and absolutely reliable. The judicious practitioner, however, will not neglect to make use of corroborative signs and symptoms. The spheroidal body of the womb will be found softened, and as it is held between the two hands in bimanual examination a feeling of semi-fluctuation can easily be made out. This softening and semi-fluctuating feel should be found in all cases.

What conditions could be confounded with pregnancy by giving

rise to the same or similar signs as those described? These, I think, are practically two: 1. Hematometra, due to an imperforate cervix. The practical man will realize that this condition will seldom embarrass him in making a diagnosis of pregnancy, as the average practitioner meets with it not more than once in a lifetime. Moreover, the history of the case would put him on his guard with reference to it, as hematometra occurs either as the result of a congenital defect, and is then found in young girls about the age of puberty, whose history is sufficiently characteristic to at least make the practitioner watchful; or it occurs later in life as the result of atresia of the cervical canal, brought about by inflammatory conditions of a destructive nature. These cases likewise are very rare, and their history is quite suggestive. 2. Certain cases of intramural fibroid tumor, in which, owing to pelvic congestion, the walls of the uterus become quite soft. But here also, in my experience, the conditions are not typical. The uterus is not uniformly enlarged, it projects perhaps anteriorly and not posteriorly, the semi-fluctuating feel cannot be made out, or some other evidence is present, to make the examiner aware that he is not dealing with pregnancy.

So far as I know, these are the only conditions which at all simulate an early pregnancy.

It is well to say a word about conditions which prevent the examiner from making out this characteristic sign of pregnancy. It will be readily seen that if pregnancy occurs in a womb which already contains a fibroid tumor, that the sign is not available. This is equally true when the pregnant uterus is jammed in between tumors of the ovary. Extreme development of adipose tissue may prevent its recognition, on the one hand by making the abdominal hand unavailable, or on the other by preventing the examining finger from reaching high enough up *per vaginam* to make out the form and consistency of the uterus. It will occasionally happen also that pregnancy takes place in a womb bound down by adhesions, in a pelvis in which the structures are distorted as the result of former inflammatory processes. In such cases the development of the pregnant womb is frequently atypical. All the conditions described have been encountered, and my remarks concerning them are based upon experience. In such cases the examiner usually finds enough to awaken his suspicions, but not enough to form a positive diagnosis, and thus is obliged to reserve his opinion.

Certain other corroborative evidences of pregnancy are very valuable during this period. The violent discoloration of the vagina, most marked beneath the urethra, frequently appears as early as the sixth week, and is usually well developed as early as the third month. To an experienced observer, who has been accustomed to note the difference between the slight blueness due to pelvic congestion and the intense discoloration which is present in pregnancy, owing to the changes in pelvic circulation, this sign is of great value.

Evidences of pelvic congestion, such as velvety softness of the vaginal walls, marked pulsation in the vaginal and uterine arteries, unassociated with inflammatory conditions, have a definite corroborative value.

Softening of the cervix has a certain but very slight importance, by no means commensurate with the stress which is placed upon it by writers and practitioners. The cervix often becomes soft and pulpy as the result of pelvic congestion unassociated with pregnancy; and, on the other hand, a cervix which is the seat of cicatricial or chronic hyperplastic changes will not become softened until the latter months of pregnancy. Therefore, in my judgment, very little dependence should be placed upon its condition.

About the fourth month the pregnant womb rises out of the pelvis. It is evident that when this takes place the valuable sign which we have critically discussed is no longer available. At this time, and until the foetal heart-sounds can be heard, the sign of Hegar, namely, the extreme softening of the lower segment of the uterus as contrasted with the firm cervix, is of the greatest value. These two signs, it will be seen, are complementary to each other. The sign we have discussed in this paper is of value prior to the ascent of the womb from the pelvic cavity, the sign of Hegar from that time until the foetal heart can be heard.

The statements contained in this paper have purposely been made emphatic, in the hope that they will attract the more attention on the part of the profession. I have not hesitated to be emphatic, because my experience has been sufficient, and has extended over such a period of time as to convince me of the absolute truth and reliability of the evidences of pregnancy under discussion.



