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**SOME OBSERVATIONS ON THE DIAGNOSIS OF PREGNANCY
IN ITS EARLY STAGE, WITH SPECIAL REFERENCE TO TEM-
PERATURE OF THE GENITAL CANAL.**

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THE symptoms and signs of pregnancy have been a subject of study for centuries past, and while it is true that investigations have yielded reward by the acquisition of many valuable landmarks indicative of that state, it is, perhaps, equally true that no other medical question has ever brought forth such a prolific offspring of ridiculous literature.

The writings of the ancients upon the subject are interesting more on account of their utter absurdity than of any practical value, but still we can yet trace the imprint of their ideas upon the superstitious minds of the lower classes. Many a woman lives with the belief that her doctor can tell when she is pregnant by simply looking in her eyes, or by feeling her pulse.

However gratifying to ourselves may be the consciousness of thinking that we are credited with the possession of such preternatural knowledge, the truth demands us to admit, on

the contrary, that the want of a positive means to diagnosticate this condition is one of the weakest points of our armor. When utero gestation has advanced sufficiently for us to detect *ballottement*, or to hear the uterine *souffle*, or the pulsations of the fetal heart, the diagnosis is rendered more easy; but even under such advantageous circumstances many and grievous are the errors that have been committed.

Pregnancy has been mistaken for other conditions, and they in turn have been mistaken for pregnancy. Pregnant women have suffered capital punishment after having been examined and pronounced "not big with child;" the trocar has been thrust into the gravid uterus under the supposition that the case was one of ascites; and perhaps no sadder case is recorded than that by Bedford, of the young lady who was driven from her native land to die an outcast, because scandal accused her of being a victim of seduction, and because medical opinion failed to establish her innocence by the recognition of a uterine tumor.

Aside from the consideration of such unhappy instances as these—than which no others tend to bring so great discredit upon our profession, the subject is of practical interest, because it is an almost every-day occurrence to be confronted and perplexed by cases of doubtful pregnancy. The earlier in gestation that the question comes up for solution the more difficult it is to be solved.

The symptoms and signs are then fewer and more uncertain. Only a few years ago, Dr. J. T. Johnson, of Washington, read a paper before the American Medical Association upon this subject.

He stated that his object would be accomplished if such a discussion of the signs of pregnancy in the early months be elicited as would place upon record some more certain way than is now generally known of determining this very important condition.

Unfortunately the discussion that followed added but little or nothing to the list of signs that was enumerated by the author of the paper, although there were present at the meeting some of the best men of the medical profession in this country.

The search for the key to this problem still continues and,

as yet, it has been as barren of result as that of the alchemist for the elixir of life. Enthusiastic men are constantly startling the medical world by the publication of the discovery of an infallible sign, but, by subsequent investigation, it either turns out worthless, or else, being of slight value, is relegated to its proper sphere of mediocrity.

An evidence of the diligence of this search may be deduced by noting the frequency with which old and wellnigh forgotten signs are dug up; the dust of oblivion is shaken from them, and they are boiled over, and served in dishes more palatable to the cultivated taste of recent research.

The writer's attention was attracted to this subject recently by the appearance in print of Jorissenne's sign, by the aid of which he claimed to have recognized the existence of pregnancy when there was no evidence present other than that afforded by the missing of a single menstrual period. An investigation of the subject was made by the writer upon ten women who were in the first three months of pregnancy, and the conclusion arrived at may be given by quoting from the report of these cases published in *The Medical Record* of January 6th, 1883.

"These results," *i.e.*, of the observations in the ten cases, "certainly do not place Jorissenne's sign very high in our scale of valuation. The number of observations is too limited to show exactly what, if any, degree of confidence can be placed in this sign, but its fallibility is proved beyond a doubt. Moreover, the same examinations, repeated at subsequent times, gave different results." Truly then, those results do not encourage us to expect much assistance from this sign.

At the time that these observations were made, with the view of ascertaining the value of the above sign, the writer took occasion to note some other symptoms indicative of the pregnant state that were presented by the ten cases, and the object of the present paper is to study the relation of these latter to the condition in question.

The only apology that can be offered for submitting a paper containing mostly negative results is, that those results were arrived at by original investigation, and that covers a multitude of faults. Any communication possessing material derived from such source (however humble that communication may be in itself) is more worthy of consideration, though less

brilliant, than one which is sired by the gleanings of different writers. In other words, conclusions derived from experiment are more valuable, though less sought for, than those by deduction. The science of medicine would make more rapid strides of advancement if the knowledge of it were derived to a greater extent from original investigation and less by the acceptance and reiteration of the opinions of others.

The symptoms and signs observed in the foregoing cases were *backache, leucorrhœa, the purple color of the vaginal mucous membrane, and the vaginal temperature.*

BACKACHE was a symptom in four multiparæ. Two had passed the first period, and two the second.

LEUCORRHEA occurred in five of the multiparous women; in two after one period, in two after two, and in one after three.

THE PURPLE COLOR OF THE VAGINAL MUCOUS MEMBRANE could be detected in four out of seven women examined for this sign.

It was present in three multiparæ after missing one catamenial period, and in one after missing two periods. It was absent in one primipara and in one multipara after the first month, and in one multipara after the second.

THE VAGINAL TEMPERATURE was ascertained in eight of the cases and was as follows:

	No. of Pregn'cy.	Duration of Pregnancy.	Time of Observation.	Temperature.
Case I.....	Twelfth	Fifth week...	11 A.M.	99.7°
Case II.....	Third ..	Eleventh " ..	2 P.M.	99.7°
Case V.....	Seventh	Seventh " ..	2 P.M.	99.8°
Case VI.....	First ...	Sixth " ..	2 P.M.	99.8°
Case VII.....	First ...	Seventh " ..	9.30 A.M.	99.8°
Case VIII.....	Tenth ..	Eleventh " ..	9.15 A.M.	99.7°
Case IX.....	Third ..	Sixth " ..	9 A.M.	99.7°
Case X.....	Fourth	Seventh " ..	2 P.M.	99.7°

Any one of the foregoing symptoms presents little significance except when occurring coincidentally with others indicative of fecundation, or when, owing to the absence of other causes, it appears to be the result of the pregnant condition *per se.*

The *backache, leucorrhœa, and purple color of the vaginal mucous membrane* are attributable to uterine congestion, and are important because directly connected with the physiological changes of gestation.

Among the earliest effects of impregnation are congestion

and hypertrophy of the uterus and its structures, and a recognition of this condition is consequently of the greatest aid in an early diagnosis of pregnancy.

The backache, which is most common during the first three months, is produced by the descent of the engorged uterus, dragging upon the utero-sacral ligaments. The leucorrhœa and purple discoloration of the vagina can, like the former, be produced by uterine congestion accompanying other conditions than that of impregnation, and it is the difficulty of eliminating these other conditions that renders the congestion due to impregnation less available for diagnostic purposes.

When the physiological congestion of impregnation can be discriminated from pathological congestions, the value of this symptom will be greatly enhanced.

Physiological congestion of the womb is always active and due, as a rule, to venereal excitement, to menstruation or impregnation. No trouble attends the recognition of which of these produces the condition. Pathological congestions, on the contrary, are passive, unless due to inflammatory action.

When of the latter character, it can be usually ascertained by the accompanying symptoms of pain, tenderness, and, possibly, fever.

The pons asinorum, then, is to discover the means to differentiate the two remaining congestions: the passive pathological from the active physiological of impregnation. To do this, is to recognize pregnancy in its earliest stage. Does the clinical thermometer suggest a means to solve the problem? Passive congestion of the uterus, it might be reasoned, is not expected to be accompanied by elevation of temperature. Six ounces of blood will not make it any warmer than one ounce, unless there exists, in addition, some heat-producing power.

If the transformation of lifeless pabulum into living tissue is one factor of heat, would it be wrong to consider those active nutritive changes involved in the development of the ovum a heat-producing power?

In opposition to this, Wunderlich and others affirm that pregnancy has no effect in increasing the temperature of the genital canal, except in the last two months of utero-gestation.

The first step to be taken in an investigation of this kind is to ascertain positively the normal temperature of the vagina.

Our authorities have placed it at about seven-tenths higher than that of the axilla, and reckoning this at 98.6° , we have, for the normal heat of this part, a temperature of 99.3° . Accepting this as correct, all of the cases here reported registered an increase of from four to five-tenths of a degree above that point. With the exception of slight nausea complained of by one, this increased (?) heat and absence of the menses were the only symptoms of pregnancy the two primiparæ offered.

CASE VI. will be briefly stated: D., white, single, æt. seventeen, presented herself September 22d, 1882, with the statement that her catamenial discharge had failed to appear, and that it was then four days after the proper time. She felt well and indeed looked the picture of health. Her menses came on when she was fourteen years old, and had recurred every month since without a single exception. There were no sympathetic disturbances or other evidences of impregnation. A placebo was prescribed and she went away with instructions to report in about ten days. On returning at the specified time, she made complaint of slight nausea and, expressing great uneasiness about her condition, consented to have a vaginal examination made. By Jorissenne's test, the pulse was 60 in a recumbent position, 66 sitting, and 70 standing. The vaginal examination was negative. The vaginal temperature 99.8° .

No accusations were made until, missing the menstrual periods of October and November, she was informed of her condition. Several months later, she had criminal abortion performed.

At first sight the thermometrical observations here reported would tend to encourage the belief that a diagnosis of pregnancy in its early stage can be readily made by this means. But while different writers agree that the average temperature of the vagina in non-pregnant women is about what has been given, many, on the other hand, allow wide limits within the range of health. It is not stated why the *normal* (?) temperature of this part of the body should vary more than that of other parts: why it cannot be fixed as accurately as is that of the axilla. The explanation is probably because the opportunity for taking the temperature of this part in *perfectly healthy women* is seldom offered. In fact, there are comparatively few women at the present day who do not have some pathological condition of the pelvic organs that would produce an alteration of local temperature. In order to obtain information upon this point, the writer made some observations to ascertain the temperature of the vagina in non-pregnant

women. The number of cases in all was thirteen. The minimum temperature registered was 98.4° : the maximum, 100.1° ; and the average of all the cases, 99.1° .

The average vaginal temperature of the pregnant cases was 99.74° . The heat of the vagina in these latter was very uniform, the variation being, in the eight cases, only one-tenth of a degree.

The temperature of the cavity of the cervix was compared with that of the vagina in about half of the cases, both of the pregnant and non-pregnant series. In a few cases the two temperatures were the same; in the remaining the difference was from two to eight tenths of a degree, in favor of the cervical cavity. The increase was about as great in one class as in the other.

The result of these observations¹ is to show that although the average vaginal temperature of a number of pregnant women is greater than the average of a number of non-pregnant cases, still individual cases of the latter class may register a temperature equal to that of the former.

One woman, two months after confinement, had a vaginal temperature of 99.9° : another, in whom no pathological condition of the genital organs could be discovered, registered 100° ; and a third, having retroversion of the uterus, reached 100.1° .

It was observed that all the cases having retroversion were accompanied by higher temperatures than the other cases of the same class.

A vaginal temperature of 100° had been reduced in five months to 99.2° , on account of the reposition of the organ and the application of a pessary.

Eliminating the cases having this pathological condition, the average temperature of the non-pregnant women would be brought down to 98.8° .

The following case bears special interest on this point.

Mrs. M., married, and a prolific mother, menstruated Decem-

¹ In taking the temperatures that have been recorded in these observations, the bulb of the thermometer was pushed deeply into the vaginal pouch, and in no case was it allowed to remain *in situ* for less than eight minutes. The instrument used was tested at the Laboratory of the Surgeon-General's office.

ber 10th, 1883. January, 1884, she missed her courses, and on the 19th of the month her vaginal temperature was 99.4° , and the cervical 100° . February 10th, she succeeded, by taking teas, etc., in bringing away the ovum. March 10th, menstruated slightly. April 27th, menses in full amount. May 13th, vaginal and uterine temperatures both 100° .

This case was not included in the summary, because the increased heat registered after the abortion was evidently due to the condition of the parts. There was marked retroversion, endometritis, and excoriation of the os.

Another point in this case is that, although pregnant when first seen, the vaginal temperature was only 99.4° . This is the only exception of a temperature below 99.7° , accompanying that condition, and the case came under observation too late to be placed with the series of pregnant cases.

Deductions.—If any positive sign of pregnancy in the first three months be discovered, it will, in all good reason, be found in some local alteration of the generative organs, and *not* in any reflex phenomena.

A constant, and the earliest change due to impregnation is active congestion and hypertrophy of all the uterine structures.

This hyperemia is necessary for the nutrition and growth of the ovum, and for the physiological development of the uterus which is to accommodate itself to the growing, and to expel the full-grown fetus.

The developmental process of the ovum and its habitat is accompanied by increased intrauterine temperature.

This increased intrauterine temperature produces some elevation of vaginal temperature.

Pathological conditions of the uterus produce an equal increase of heat in the vagina.

Might not more accurate results be obtained by using the thermometer differently, or by the use of a more delicate instrument than the ordinary clinical thermometer? If heat is generated by the developing ovum, it would be more appreciable at the upper part or body of the uterus, but, on account of the inaccessibility of this portion for examination, we have been forced to depend upon having the temperature of the vagina or cervix uteri increased by the heated blood brought down in the uterine veins. A glance at the anatomical distri-

bution of the vessels of the uterus will show that the greater part of the blood is brought to, and conveyed from the upper part of the organ by the ovarian vessels, and consequently does not pass to the vagina.

The bulb of a long thermometer might be passed through the anus, and applied to the posterior surface of the body of the uterus from the rectal side of the organ. The descent of the womb during the first months of gestation would render such a procedure less difficult than is the case at other times. Or possibly an instrument properly constructed could be brought in contact with the anterior wall of the uterus, by passing it through the urethra and into the bladder.

In conclusion a brief reference may be made to an article on the subject of uterine thermometry by Dr. Marduel.¹

Baerensprung, he says, was probably the first to make any researches upon the temperature of the fetus, which he stated to be higher than the mother's. Schaeffer confirmed these observations by taking the temperature of the infant, as Baerensprung had done, immediately after its birth. Wurster found the rectal temperature of a fetus taken during labor in breech presentation to be $\frac{2}{10}$ higher than the temperature of the mother's vagina. As a result of his investigations previous to 1872, he concluded that the fetus has a temperature more elevated than that of the mother, and that the gravid uterus has a higher temperature than that of either the axilla or vagina. He thought that this fact might serve to indicate the life or death of the fetus *in utero* as well as be diagnostic of pregnancy.

Alexeeff confirmed the observations of Wurster. He took the fetal temperature during eight cases of labor, the rectal in four breech presentations and the buccal in the same number of presentations of the face. The fetal temperature was higher than that of the mother's vagina, from $1\frac{1}{4}$ to 2.8 in the rectum, and from $\frac{5}{10}$ to $1\frac{1}{4}$ in the mouth.

In 1866 Schroeder wrote that the temperature of the gravid uterus was .34 higher than in the vagina and $\frac{5}{10}$ than in the

¹ "De la Thermométrie utérine comme Moyen de Diagnostic de la Grossesse ainsi que de la vie du Fetus. D'après les Travaux de Cohnstein, Fehling, Schlesinger et Alexeeff."

Mém. Soc. de Sc. Méd. de Lyon (1876), 1877, xvi., p. 103.

axilla. Winckel gives for the first a difference from $\frac{2}{10}$ to .34. Cohnstein published an article in 1872, showing that after the death of the fetus the temperature of the uterus dropped. He stated that an elevation of temperature of the uterus above that of other internal organs was a proof of the existence of pregnancy, and a proof of great value in the first three months.

Eighteen observations at the Obstetric Clinic of Leipzig, made by Fehling, went to confirm the views of Cohnstein regarding an increased temperature indicating the life of the fetus, and that a temperature equal to, or, with greater reason, less than that of the vagina indicated its death. Schlesinger doubted the accuracy of the above observations, and stated that he found the temperature of the non-gravid uterus was likewise higher than that of the vagina.

Cohnstein claimed that such cases were due to the existence of an acute inflammation of the parts, and that in general he believed an elevated uterine temperature indicated pregnancy. On the other hand, that which is important in a diagnostic point of view is, that the temperature of the uterus does not exceed that of the vagina in cases of uterine fibroids, in chronic uterine infarctus, ovarian tumors or increase in size of the abdomen due to accumulation of gas.

It is proved, he says, that a uterine temperature higher than that of the vagina, in the absence of pathological conditions, is a sign of pregnancy, and of pregnancy with a living child.

Several of the cases observed by the writer disproved this assertion. For instance, one case, in whom no pathological condition could be found, and who was not pregnant, had a vaginal temperature of 99.2° , and an intracervical of 99.9° . It could be said with more truth that a vaginal temperature equal to, or more than 99.7° , is a strong presumptive evidence of impregnation, provided there are no pathological conditions of the uterus present, and no increase of heat in the axilla.

TRANSACTIONS OF THE OBSTETRICAL AND GYNECOLOGICAL SOCIETY OF WASHINGTON, D. C.

Stated Meeting, May 16th, 1884.

DR. S. C. BUSEY, *President, in the Chair.*

DR. H. D. FRY read a paper on

THE DIAGNOSIS OF PREGNANCY IN ITS EARLY STAGE, WITH SPECIAL REFERENCE TO TEMPERATURE OF THE GENITAL CANAL.¹

DR. SMITH, in opening the discussion, said we were too prone to rely altogether upon the signs of pregnancy as laid down in the text-books. The question was, had we any valid reason for making a positive diagnosis of early pregnancy, by relying upon a rise of vaginal temperature. He had examined four women during this afternoon between 2 and 6 P.M., for their axillary and vaginal temperature, which gave results differing from those of Dr. Fry, and being anomalous if Dr. Fry's views were correct. The figures were as follows:

Case 1.	Vaginal temp.,	100.8°.	Axillary temp.,	99°.
Case 2.	“ “	100.4°.	“ “	99.4°.
Case 3.	“ “	100.8°.	“ “	99.8°.
Case 4.	“ “	100.5°.	“ “	99.5°.

None of these women were either sick or pregnant, and all but one were examined before dinner, so that the question of the effect of digestion could not arise. In Dr. Fry's cases of pregnancy, the average vaginal temperature was only 99.7°, while in the non-pregnant it was 99.1°.

The other symptom relied upon and added to that of rise of temperature was backache, but Dr. Smith could not recall a case where backache was a prominent symptom of early pregnancy. He had met with slight backache, but not amounting to more than any other ache of which women would complain, and if either of these aches was pathognomonic of pregnancy he had failed to discover it. Rise of temperature as a symptom of pregnancy, was mentioned by some authorities. Thus Meadows said that the vagina was the hottest accessible part of the pregnant woman. Dr. Smith did not believe there was any symptom which, taken by itself, was characteristic of pregnancy. A man's individual experience would more surely enable him to determine the existence of pregnancy than any rule laid down in the text-books. The knowledge gained by frequent examinations of women, enables a physician to reach correct conclusions almost intuitively. It was only by taking the symptoms as a whole, and not by selecting a single one, that correct conclusions were to be reached. All know how fallacious a symptom suppression of the menses is, even when associated with nausea. Dr. Smith then gave the symptoms which usually go along with pregnancy, and laid special stress upon the existence of an enlarged uterus, as determined by conjoined manipulation, when associated with other symptoms. A short time ago,

¹ See original articles in this number.

he was requested to examine a young woman who had been indiscreet, in order to determine whether she was pregnant or not. He was not permitted to see her face, which was covered with a sheet, nor to ask any questions except through her female friend who was present. A digital examination and the conjoined method showed that the uterus was small. Her breasts were found to be normal, showing no areola except such as is usual in virgins. He therefore gave the opinion that the woman was not pregnant, but that the suppression of the menses was due to the fact that she was frightened at the possible results of her indiscreet doings. By a peculiar coincidence, some weeks ago, he was called upon, in one afternoon, by four women who wanted to know whether they were pregnant or not. Two of these were married, one a widow, and one a "grass-widow." In examining one of them, he found blood at the end of his finger, and predicted that she would be unwell before next morning; and in the other cases he was able to state that no pregnancy existed. The greatest difficulty he found in cases of retroversion; he was reasonably positive when the uterus was in a normal position or when it was anteverted, but in retroversion he could not utilize conjoined manipulation for the purpose desired, without using more force than was justifiable in such examinations. As to the symptom of *flat belly* insisted on by some, he had no faith in it. Unfortunately we cannot always believe what women tell us, and it is a good practice to adopt Gooch's aphorism: "Never rely upon the evidence of their tongues, but on that of their bellies."

DR. J. T. JOHNSON.—Dr. Fry had not succeeded in pointing out a positive sign of early pregnancy, any better than he (Dr. J.) had in the paper referred to by Dr. Fry. The importance of the subject demanded that we ought to be able to give a positive opinion, but in fact we were no better able to do so now than others were a hundred years ago. He thought that too much faith had been placed in rise of temperature of the genital organs, for this had failed in too many cases. Rise of temperature only showed that there was congestion, without giving the cause of the latter. Dr. Smith relied mainly upon the enlarged uterus, when accompanied by other signs and symptoms, but the trouble was that we were not asked for an opinion when all the palpable signs were present. Dr. Smith's patients, as well as Dr. Fry's, had had children, and a woman of this kind would not be likely to consult a physician when all the usual symptoms were present; they asked advice when the usual signs were absent. In his paper, referred to by Dr. Fry, Dr. Johnson mentioned a case in which the patient desired to visit Europe on a pleasure trip, provided she was not pregnant. She had missed her menses once, and presented a dark areola, and other signs; she was, therefore, advised that if her menses failed to appear at the expected time, she had better not leave her home. Her menses did not appear, and her friends left without her, shortly after which the menses came on. In the discussion on his paper, all agreed that if an enlarged uterus could be made out by palpation, and if the neck was soft and larger than normal, we might rely on these as signs of pregnancy, provided the woman had been exposed to the risks of becoming pregnant. As to taking the intra-cervical temperature, by placing the bulb in the canal, he held the practice to be risky, a number of cases of abortion having followed thereon. Dr. Smith had, in four cases, pronounced that the parties were not pregnant, but had not stated on

what single sign he reached his conclusions. (Dr. Smith said he relied upon the conjoined manipulation.) Dr. Johnson admitted that enlargement of the uterus, proved by manipulation, together with other signs, seemed to help us out of doubt in most cases.

DR. MCARDLE inquired of Dr. Smith, how long the ladies examined by him had missed their sickness. (Dr. Smith: Two months.) And would the doctor be willing, upon the strength of his examination, to introduce a sound into the uterus. (Dr. Smith: No.) Then how could he give a perfect diagnosis of absence of pregnancy?

DR. SMITH said he took care to leave a loophole, in case of a possible mistake. He would state that, to the best of his knowledge, a woman was not pregnant, and yet leave room for doubt so as to protect himself. There was another point, viz.—the differentiation of membranous dysmenorrhea and early pregnancy. Young married women sometimes cast off menstrual membranes and call it abortion. In a recent case, a young lady who believed herself pregnant after jumping a fence and other violent exercise, had membranous dysmenorrhea, shedding a perfect cast of the uterine lining. In these cases, as also in retroversion, the diagnosis was difficult.

DR. HAGNER suggested whether we might not get the *placental bruit* or the *fetal heart-sounds*, by placing a stethoscope on the neck of the uterus. He also threw out the idea that, with the present strides made in the application of electricity, a delicate galvanometer might show the difference between the passage of a current through water and solid walls. If there was no pregnancy there would, of course, be no amniotic fluid, and the slips of platinum would not separate, while they would separate if the current passed through fluid.

DR. ADAMS said that the remarks made applied to cases where there was no difficulty in securing an examination, but not to those where it would be disastrous to a young practitioner to ask for a vaginal examination. He mentioned the case of a young lady who consulted him for suppression of the menses of several months' duration, which she attributed to cold, contracted at the time of an attack of measles. There was no abdominal enlargement; she had a distressed look and some cough. He declined to give an opinion, but thought she was pregnant. A month after, a thorough examination revealed softenings in the apex of the right lung. She has had two attacks of epistaxis, but the menses have not returned, and there is no enlargement of the abdomen. If he had been hasty in his conclusions, he would have condemned the girl unjustly. These are the cases where difficulty of diagnosis arises.

DR. BUSEY could corroborate the value of rise of cervical temperature as a diagnostic mark of early pregnancy. His experiments, some years ago, had led him to rely on the difference between the cervical and axillary temperatures, the rise in the former being from 1° to 1.5° in pregnant cases. He had applied this in a number of cases seen in consultation, and the results verified his opinion. In one case, the physician, the wife, and the husband all denied the presence of pregnancy, but the result settled it. In another case he saved the woman from being operated upon by determining pregnancy through the thermometer. At the same time he pointed out that this rise of cervical temperature might be due to other causes, which should first be excluded. He always took the temperature in the cervix and axilla both,

and had twice in his life proved that a woman was not pregnant when she was supposed to be so. In one of these cases the attending physician, the husband, and the nurse declared that the woman had gone to ten months. The thermometer showed no rise of temperature and the woman was not pregnant at all. In the second case the lady stated that she was in her seventh month; there was no rise of temperature and no pregnancy. He did not rely on vaginal, but exclusively on cervical rise of temperature, although his recollection of the difference between vaginal and axillary temperature corresponded with Dr. Fry's figures. While sure of its diagnostic value, he did not assert that it was pathognomonic. We could not rely on one symptom alone in pregnancy. (Dr. Fenwick asked as to the value of the dark areola in cases of first pregnancy.) Dr. Busey had lately determined a diagnosis by a dark areola and the frequency of micturition; but we should group a number of symptoms together, and this, as a rule, placed the case out of doubt. At the same time, grave errors had been committed; thus, Kimball, of Lowell, admitted that he had opened a pregnant woman under a mistaken diagnosis.

DR. JOHNSON.—Dr. Fry had claimed that the rise of temperature in the vagina of $.7^{\circ}$ indicated pregnancy. How would he account for the discrepancy between his and Dr. Busey's figures of 1° to 1.5° ?

DR. FRY.—His average rise was $.8^{\circ}$.

DR. KLEINSCHMIDT, referring to the value of the dark areola, said that in very light complexions we could place no reliance upon the areola's changes. He had saved the reputation of a young girl who had had a baby, and who was suspected by her family, by showing her mother the unchanged areola, which absolutely gave no sign that pregnancy had ever existed.

DR. FRY, in closing, said his paper had presented nothing positive, and he had from the start apologized for the negative character of his results. He had simply held that a vaginal temperature $.7^{\circ}$ above that of the axilla was presumptive of pregnancy, if there was no fever or other local cause. Cohnstein, in his first paper, advised to place the bulb of the thermometer in the uterus between the membranes and the walls, holding that no bad effects resulted. In a later paper, however, he said that the practice was dangerous. As to backache as a symptom, he had not spoken of it as prominent, but it was present in four of his ten cases; it was one of the signs of uterine congestion, as was the purple discoloration of the vagina, and neither was of great value in a diagnostic sense; nor were headache and nausea. Dr. Smith had claimed that the fingers, in skilful hands, were quite enough, but a sufficient number of errors had been committed in that way to caution us. Thus, in a woman who had borne children and whose uterus was in a condition of hyperplasia, bimanual examination would afford no help. As to Dr. Hagner's reference to the use of electricity, he had suggested some delicate instrument, thinking of Langley's actinic balance, which was so delicate that it would determine the temperature of the moon's rays. He thought the symptoms in Dr. Adams' case suggested phthisis and not pregnancy.