SYPHILIS IN PREGNANCY*

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IN women the initial lesion of syphilis is more elusive than in man and unless seen on the vulva usually is unnoticed. Levenson and Goldenberg,[1] in 465 recently infected women, failed to find even a scar of a chancre on the genitals. The secondary manifestations, likewise, are often unnoticed. Skin eruptions are mild and disappear rather rapidly; on the other hand, the presence of condylomata lata may cause the patient to consult her physician. It is the history of the previous pregnancies that is most significant. Only 217 of the 310 gestations which occurred in the 76 patients herein studied went to term, while 93 terminated either in miscarriage or the birth of syphilitic infants.

TABLE I

HISTORY OF PREVIOUS PREGNANCIES

Total pregnancies	310
Full term living infants	217
Full term living infants who died early in life	21
Full term stillbirths	18
Premature living infants	5
Premature living infants who died early in life	3
Premature stillbirths	9
Miscarriages	68

Abortion in the first trimester is noted but slightly more frequently than in ordinary pregnancy; on the other hand, interruption of pregnancy at the fifth, sixth and seventh month is common.

From the foregoing, it is evident that syphilis complicating pregnancy in a primigravida seldom is recognized until the damage is done, unless the practice of making routine serological examinations is followed. This conclusion corroborates that made in our clinic in 1926[2] when a study of 144 pregnant syphilitic women was reported. Only 6 of the latter gave evidence of a primary lesion, while the history and physical examination were suggestive in but 34 of the patients in the series.

At the time of admission to our clinic, blood for the Wassermann and Kahn tests is taken. If it is found to be positive or questionable, the tests are repeated in order that laboratory error may be eliminated. Should the reaction be strongly positive, treatment is inaugurated even though no other evidence of syphilis is found. Treatment, likewise, is given to all patients with a definite history, even though the Wassermann may be but mildly positive.

When a suspicious history is accompanied by a negative or questionable Wassermann, 0.3 gm. neosalvarsan in 10 c.c. of freshly distilled water is injected intravenously and blood is taken for the Wassermann test one, four and eight days subsequently. If, after this provocative injection, the reaction is strongly positive, the patient receives the routine antiluetic treatment. In a recent case, this provocative measure definitely revealed syphilis in the mother, and, as a result of these observations, the disease was also discovered in her husband and two other children, all of whom were unaware of infection.

TREATMENT

During pregnancy, treatment is given primarily in the interest of the child, and fortunately the chance of obtaining a good result in this respect is excellent. All who are experienced in the use of arsphenamine for this purpose, agree that comparatively few injections have a most marked effect upon fetal syphilis. This drug, accordingly, has proved itself to be a worthy adversary

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of the archdestroyer of fetal life. How these remarkably good results have been obtained has not been explained, aside from the observation that relatively large amounts of arsenic have been recovered from the meconium, which proves that arsenicals pass through the placenta and reach the unborn child.[3] For some unexplained reason, their potency as spirocheticides seems to be much greater in fetal than in mature tissues, as is shown by the fact that even though the Wassermann may remain positive in a well treated mother, her child often is born free from syphilis.

Naturally, the earlier in pregnancy treatment is inaugurated, the better will be the results for both the mother and the child, and our aim should be to secure a negative Wassermann as soon as possible. We accordingly should start the treatment immediately after the diagnosis is made in the hope that this desired effect may be obtained. The fear that arsphenamine might cause a miscarriage formerly led many conscientious physicians to avoid its use during pregnancy. However, those who had the courage to treat all cases of pregnancy syphilis vigorously, soon found that it was the disease and not the treatment that caused these interruptions of gestation. Pregnancy, therefore, is not a contraindication but a strong indication for the vigorous use of arsenicals in the fight against congenital syphilis.

Even though circumstances prevent early treatment, the use of arsphenamine as late as the third trimester often is productive of extraordinary results. Inadequate as the treatment may be, stillbirths frequently are thus prevented, syphilis in the surviving children usually is rendered less innocuous and more easily controllable, and, occasionally, a child is born without any evidence of the disease.

Although pregnancy syphilis was treated in our clinic as early as 1919 by intravenous injections of salvarsan, the mentioned generalizations were made possible only by the accumulated experiences of the years that followed[4] and, as a result, early in 1934, the following routine was devised: Three-tenths gm. of neosalvarsan (neodiarsenol) in 10 c.c. of freshly distilled water is injected into the basilic or cephalic vein. If this is well tolerated, the dose is increased to 0.6 gm., and is repeated weekly. In addition, 1 c.c. of 10 per cent bismuth salicylate in oil is given intramuscularly into the buttocks two days before each intravenous injection of the arsenical. There are no so-called courses, nor are there rest periods. The treatment with both bismuth and neosalvarsan accordingly is repeated at weekly intervals continuously from the time of the first injection until the child is delivered.

Prior to each neosalvarsan injection, the blood pressure is taken and the urine examined for albumin. If any evidence of toxemia is present, the arsenical is withheld until all toxic signs have disappeared. In case of doubt, the treatment is not given. That the use of this drug is not without danger is shown by the fact that 3 of our cases died as a result of arsenical poisoning. These, however, occurred before the responsibility for the treatment of pregnancy syphilis was taken over by our prenatal clinic. With the inauguration of the described routine all cases of syphilis which have been discovered in our prenatal clinic have been treated by one of the members of our staff. As a result, early toxic states have been recognized, and a repetition of these unfortunate arsenical accidents has thereby been prevented.

To the 76 patients who form the basis of this report, 717 injections were given without any serious complication. One woman, however, developed an exfoliative arsenical dermatitis which slowly disappeared after the injections were discontinued.

END RESULTS

Two of the patients included in this series received no treatment. The beneficial effect of arsphenamine in the remaining 74 is shown in Table 11. Only 2 infants were

stillborn, and both of these were obstetric deaths. In one a craniotomy was done, and in the other, the child had hydrocephalus. Twenty infants of the remaining 72 showed some signs which were suggestive of syphilis. Sixteen of these, on *x*-ray examination, revealed the characteristic long bone changes of lues. Of the 20 bad results, 13 occurred in women who had received less than ten injections of arsphenamine.

Table II
END RESULTS OF TREATMENT

Injections of Arsphenamine	Total Cases	Stillbirths	Living Infants with Syphilis	Living Infants without Syphilis
25–30	3	1 (hydrocephalus)	1	1
20–25	3	1 (craniotomy)	1	1
15–20	8	0	1	7
10–15	18	0	4	14
5–10	23	0	6	17
1–5	19	0	7	12
Total....	74	2	20	52

SUMMARY

1. In women, the primary and secondary manifestations of syphilis often are unnoticed.

2. The history of previous pregnancies is significant.

3. The routine serological examination is most important.

4. A provocative injection of neosalvarsan occasionally reveals latent syphilis.

5. Pregnancy is a strong indication for the vigorous treatment of syphilis with the arsenicals. Even if the patient with pregnancy syphilis is first seen late in gestation, she should be treated.

REFERENCES

1. Levenson and Goldenberg. *Ann. de derm. et de syph.*, 8: 737, 1927.
2. Beck, A. C. Syphilis in pregnancy. *New York State Jour. Med.*, 26: 563–564 (June 15) 1926.
3. Eastman, N. *Am. Jour. Obst. and Gynec.*, 21: 60, 1931.
4. Beck, A. C. Syphilis complicating pregnancy. *Am. Jour. Obst. and Gynec.*, 2: 416 (Oct.) 1921.