THE ANTUITRIN S INTRADERMAL PREGNANCY TEST

BY

A. MORTON GILL, M.D., M.R.C.P.*Medical Registrar, Middlesex Hospital*

AND

JOHN HOWKINS, M.D., M.S., F.R.C.S., M.C.O.G.*Gynaecological Registrar, Middlesex Hospital*

Many attempts have been made to devise a pregnancy test which is simple, rapid, inexpensive, and accurate: those of Friedman and Aschheim and Zondek most closely approach this ideal. By repeated and universal trial they are acknowledged to have reached a high degree of accuracy—namely, 99 per cent. in the non-pregnant and 97 per cent. in the pregnant woman. Both tests, however, retain certain inherent disadvantages: they are relatively expensive, they require two and four days respectively for their interpretation, and they demand the co-operation of a skilled biochemist for their performance. Any test, therefore, which is to supersede these must possess not only their proven accuracy but also the properties in which they are deficient.

With these ideals in view, and hoping to overcome the threefold disadvantage of the biological test, Pollatschek and Porges (1929) devised the intradermal sensitivity test, using a preparation of gonadotropic hormone. They claimed absolutely reliable results. Deutsch (1929), Strauss (1930), and Dowell (1933) substantiated the original workers' findings; they were followed by Gilfillen and Gregg (1936), who used a purer preparation (antuitrin S) with similar results. On the other hand, Weisman and Yerbury (1937), using the same technique as Gilfillen and Gregg, reported the following figures: seventeen non-pregnant single girls, sixteen pregnant; twenty-six male medical students and physicians, twenty-four pregnant; nineteen pregnant women, two non-pregnant; from which they naturally concluded that the test was worthless.

Another intradermal pregnancy test was elaborated by Gruskin (1936) and later by Schwartz (1936), using placental extract, the technique and rationale being similar to that of the antuitrin test. Many of their results were, however, equivocal, and the test is now regarded as fallacious in this country (*British Medical Journal*, October 16, 1937, p. 757).

Feeling that no exhaustive trial had been made of the antuitrin test in England, and fearing that its enthusiastic adoption by practitioners might lead to serious clinical error, we determined to investigate its accuracy in a large series of cases, faithfully following the technique of Gilfillen and Gregg and reading the results at one-half, one, and two hours. Our material consisted of 147 cases (forty-nine males and ninety-eight females). Seventy-three of the women were between the fourth and ninth months of pregnancy and twenty-five were non-pregnant, fifteen being in the pre-menopausal and ten in the post-menopausal age.

TABLE I.—Showing Results of the Active Antuitrin S Test

	Positive (Non-Pregnant)	Negative (Pregnant)
Males	44	5
Females (pregnant) .. .	51	22
Females (non-pregnant pre-menopausal) ..	13	2
Females (non-pregnant post-menopausal)	8	2

These results were so palpably inaccurate that we abandoned further investigation of the antuitrin test at this point.

Reasoning that the reaction obtained in those cases which showed a positive skin flare was perhaps not due to the active hormonal content of the injected substance but to the presence of foreign protein, we further tested forty-one cases (ten males, thirty-one females), using inactivated antuitrin S. Twenty-one of the females were between the fourth and ninth months of pregnancy and ten were non-pregnant. The results were as follows:

TABLE II.—Showing Results with Inactivated Antuitrin S

	Positive (Non-Pregnant)	Negative (Pregnant)
Males	10	0
Females (pregnant) .. .	12	9
Females (non-pregnant) .. .	10	0

From the above figures it is evident that the results of this test are as fallacious as those obtained with active antuitrin S.

Conclusion

The antuitrin S intradermal test for pregnancy, which has been so enthusiastically acclaimed, has proved in our hands to be valueless.

We are indebted to Dr. T. Izod Bennett, who sponsored this investigation, and to Mr. L. Carnac Rivett for permission to test patients under his care. Messrs. Parke, Davis and Co. very kindly supplied the antuitrin S used in this investigation.

REFERENCES

- Deutsch, A. (1929). *Zbl. Gynäk.*, **53**, 2920.
 Dowell, D. M. (1933). *J. Missouri State med. Ass.*, **30**, 275.
 Gilfillen, G. C., and Gregg, W. K. (1936). *Amer. J. Obstet. Gynec.*, **32**, 498.
 Gruskin, B. (1936). *Amer. J. Surg.*, **31**, 59.
 Pollatschek, O., and Porges, R. (1929). *J. Amer. med. Ass.*, **93**, 559.
 Schwartz, E. (1936). *Amer. J. Surg.*, **33**, 225.
 Strauss, H. (1930). *Ibid.*, **8**, 1271.
 Weisman, A. I., and Yerbury, C. C. (1937). *Med. Rec.*, **145**, 203.

A. Mayer (*Münch. med. Wschr.*, July 23, 1937) discusses from the point of view of sickness insurance the rate of growth of cancer of the cervix. In general he concludes that a woman with this condition who became insured six months before the diagnosis was made must have had it at that time if the growth is inoperable, but may not have had it if the growth is an early one. Stähler, analysing 200 cases, has estimated that the average duration of the initial symptomless period is 2.7 months. Very great variation, however, is shown in the rate of growth. As examples of slow growth cases are cited of women, aged from 34 to 44, who had had symptoms for one to six months but in whom the growths remained operable and practically stationary for ten to fifteen months, so that they were still classified as operable fourteen to twenty-one months after the first onset of symptoms. On the other hand Mayer has seen a woman, aged 22, who had had a blood-stained discharge for fourteen days and presented an early ulcerating carcinoma of the portio with a metastasis in one fornix: ten days later the primary growth had attained the size of a billiard ball and death followed after eight days. Weinzierl found microscopically adenocarcinoma in a non-hypertrophied but eroded cervix, and saw nine days later a cauliflower tumour the size of a small hen's egg, which was found to be an aggressive cylindrical-cell carcinoma of immature cell type with much penetration of lymph vessels.