

test as more exact and as permitting finer differentiation in colors than the biuret test.

When the optic method is used a mixture of 1 c.c. of a 10 per cent. solution of placental tissue in physiologic salt solution and of 2 c.c. of serum is placed in a small polarization tube and the initial rotation is read in the polariscope. Then the tube is placed in an incubator and the rotation determined at various intervals up to thirty-six hours. The maximum change with non-pregnant serum never exceeds 0.03 degree, while pregnant serum gives a change in rotation from 0.05 to 0.2 degree.

The observation by Abderhalden that the serum of pregnant women splits up human placental protein has been confirmed by numerous observers in what appears to be more than two thousand cases.

Most of the authors cited have obtained positive results in practically all cases of pregnancy. On the other hand, less favorable results are reported by Engelhorn, Behne, and by Williams and Pearce, who assert that they have also obtained positive results in other conditions than pregnancy. They conclude therefore that "the test cannot be accepted as an accurate clinical method until it has been more thoroughly investigated and the possible sources of error corrected." It is interesting to note that Schlimpert and Hendry, who tested in all 316 cases, found at least eight or ten different errors in their earlier work which interfered with accuracy. They, as well as many others, including Abderhalden himself, emphasize the great importance of an exact technic. After numerous trials Schlimpert and Hendry obtained positive results in all of their last seventy-nine cases of pregnancy.

Lindig and later King have prepared dried extracts of placenta in sealed tubes which they believe are an improvement on Abderhalden's method of preparing and keeping the placental tissue; but Abderhalden holds that Lindig's preparations of dried placenta are untrustworthy and that all his powders after a few months will give a positive ninhydrin test.

We must conclude then that so far as pregnancy is concerned we have here a method of diagnosis of practical value and wide applicability. The results at hand show that the ferment is present in the blood from the sixth week after the last menstruation until the end of the third week post partum. Experiments on animals have shown that the reaction may be obtained within twenty-four hours after implantation of an ovum. The ferment is present also in case of extra-uterine pregnancy.