

on top of another. After a thick wall has been built up between the rectum and the urethra, the rectum is partly twisted and a sound part is sutured to the built-up wall. The levator ani and sphincters are sutured in place. If the postanal space was entered, a good-sized drain is left in there.

If at the time of the operation there should exist both a urethrorectal and a urethroperineal fistula, the best policy is to repair the urethrorectal fistula first, waiting for a future time to repair the perineal fistula, because there would be a too extensive injury inflicted on the periurethral wall in one sitting, and because an open drain through the perineum will greatly assist in relieving the repaired part, until thoroughly healed, from the expansive pressure of the urine. A perineal fistula is easier to repair later on. It is a great temptation to repair the two in one sitting, but the result is generally a failure. In repairing the perineal fistula, the same overlapping, building-up method will give good results.

THE PRESENCE IN THE URINE OF DIALYZABLE PRODUCTS REACTING TO NINHYDRIN

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In a recent article in *THE JOURNAL* Warfield¹ says:

It occurred to me that if there was a specific ferment in the blood-serum which was elaborated to split up the products derived from the placenta, syncytium especially, there should be also in the blood-waste, products of the metabolic activity of the growing fetus. These substances had to leave the body by some route and the most logical route was the urinary excretion. These products should be peptones and amino-acids, they should dialyze out and one should then be able to find them by means of the ninhydrin reaction in the dialysate. It was found that actually such is the case.

In support of this theory, tests on seventeen cases of pregnancy are cited, all of them giving positive results; seven cases in the puerperium were tested with the result that "the eleventh day was the earliest to show a negative reaction, while one still showed a faint reaction on the seventeenth day." If correct, these observations would be of the utmost importance and would greatly simplify the "Abderhalden test."

I have carried out a series of reactions in order to prove or disprove these conclusions. The water containing the dialyzers, the glassware, pipets, etc., were all carefully tested for the presence of the ninhydrin reaction before being used. The work was done with the dialyzing thimbles supplied by Parke, Davis & Co., and these had been proved to be impermeable to all but amino-acids by repeated testing and also by a long series of tests with the original technic. Three different solutions of ninhydrin were used.

February 10 the urines of six positively pregnant women were tested for the presence of the ninhydrin reaction, without dialyzing, by boiling 2 c.c. of urine with 0.2 c.c. of a 1 per cent. solution of ninhydrin. The accompanying table shows the results.

It will be observed that whenever the urine was strongly acid, the ninhydrin reaction was negative. This indicates that the acidity inhibits the reaction, a fact that is already well known. An attempt was made to bring out the test by neutralizing these strongly acid urines, but the reaction remained negative. It was further observed that, although a urine may give a strongly positive ninhydrin reaction, if made strongly acid by the addition of acetic acid the reaction will disappear and will not reappear when the urine is exactly neutralized by the addition of sodium hydroxid. The same day, those urines that had given negative tests before dialyzing, were placed in dialyzing thimbles and the dialysates tested at the end of twenty-four hours. All three, that is, Nos. 2, 5 and 6, gave strongly positive reactions with ninhydrin.

February 11 the urines of three women known to be pregnant were dialyzed. At the end of twenty-four hours the dialysate gave a positive reaction in each instance. These urines did not contain albumin and were acid in reaction.

February 12 the urines of ten non-pregnant women suffering from various surgical conditions were dialyzed, and the dialysates tested for the presence of the ninhydrin reaction. Without exception, these urines gave distinctly positive reactions. The reactions of these urines to litmus varied from alkaline to acid, the majority were acid. No matter what the reaction of the urine before dialyzing, however, the dialysate is

NINHYDRIN TEST OF URINES FROM SIX PREGNANT WOMEN *

No.	Reaction	Ninhydrin
1	Acid	+
2	Strongly acid.....	—
3	Neutral	+
4	Neutral	+
5	Strongly acid.....	—
6	Strongly acid.....	—

* All urines were albumin-free.

always neutral to litmus. These urines were voided just before luncheon, and none of them gave a positive reaction with the ordinary tests for albumin.

February 13 the urines of four non-pregnant women and two men were tested. One of the men had nephritis, the other was normal. The dialysates from all of these urines gave positive reactions with ninhydrin.

February 14 the urines of four healthy men were tested; the dialysates giving negative reactions.

In view of these results it was thought that the amino-acids present might be accounted for by the action of bacteria on pus and other albuminous matter present in the urine, especially in that of women. To avoid this, the urine was thoroughly boiled as soon as voided, all material used in the tests was sterilized by boiling and the tests were set up under aseptic precautions. Under these conditions ten urines from non-pregnant women suffering from various surgical conditions and two from known pregnant women, were tested. At the end of twenty-four hours the dialysates from eleven of them showed positive reactions with a freshly prepared solution of ninhydrin, and one of them a negative reaction. The case giving a negative reaction was one of carcinoma of the breast.

In regard to the presence of dialyzable substances reacting to ninhydrin in the urines of others than pregnant women, Dr. Warfield says:

In order to show that in normal urine there are no dialyzable substances which give a positive reaction with ninhydrin, a number of urines from healthy persons were tested. These gave no color reactions.

1. Warfield, Louis M.: The Presence of Dialyzable Products Reacting to Abderhalden's Ninhydrin in the Urine of Pregnant Women; a Preliminary Report, *THE JOURNAL A. M. A.*, Feb. 7, 1914, p. 436.

The conclusions to be drawn from the few tests that I have performed are:

1. After dialyzing the urines of pregnant women the dialysate always gives a positive reaction to ninhydrin.

2. After dialyzing the urines of non-pregnant women, the dialysate frequently gives a positive reaction to ninhydrin; occasionally, under the same conditions, the urines of men give positive reactions.

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VOLUNTARY DISPLACEMENT OF THE EYE

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The following unique case was called to my attention about three months ago.

E. J. H., aged 30, a native American, soldier, unmarried, was admitted to the Government Hospital for the Insane April 2, 1909, with dementia praecox. His previous history was unimportant; he had completed grammar- and high-school courses and two years in a university.

The patient entered the army in 1906. During the year 1908 he showed evidence of lack of attention and inability

but not directly. The cornea of the left eye was perfectly clear, the anterior chamber equal to the right in depth; there was very little conjunctival injection and blepharitis marginalis of the left eye. The left fundus was easy to examine, and showed complete atrophy of the optic nerve, but no signs of active inflammation. There was but little change in the caliber of the retinal vessels, the arteries being slightly smaller than normal and the veins slightly dilated.

When asked to show me what he could do with his eye the patient placed his index-finger on the lower left eyelid and, with slight pressure, forced the eye outward and upward from the socket. The globe was at least an inch beyond its normal plane, as shown in Figure 2. When the finger was removed from below the eye, the globe, by the action of the muscles, was redrawn into the socket. The return of the eye was rapid until about three-quarters of the way back, then more slow, the muscles restoring it to the position shown in Figure 1. By making a sort of hook with his index-finger and placing it above the eye the patient could bring the eye outward and downward along the side of his nose, as seen in Figure 3. The manipulation of the eye seemed to cause the patient not the slightest pain or inconvenience, in fact, he stated that he felt no pain whatever. Fixation was perfect, as can be seen by a glance at Figure 1, both the left and right eyes looking straight into the camera.

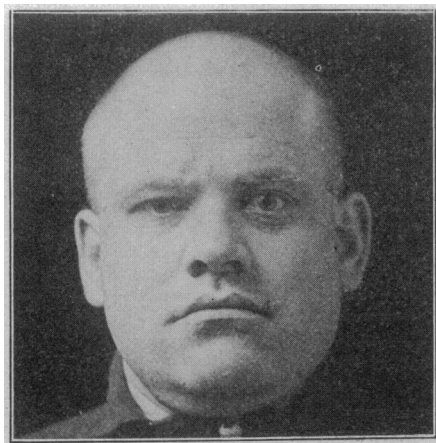


Fig. 1.—Left eye in orbit; note its slight prominence and widening of the palpebral fissure. No strabismus; fixation of left eye equal to right.

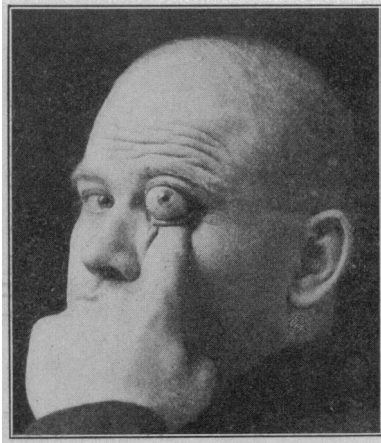


Fig. 2.—Eyeball forced out of orbit upward. No evidence of pain.

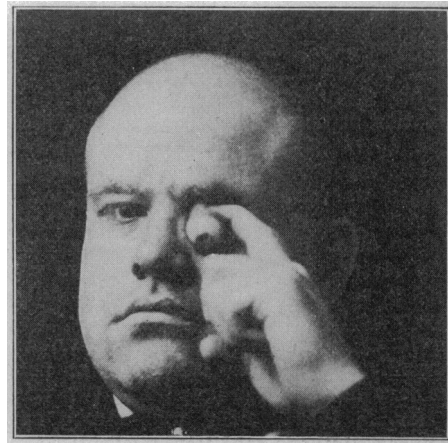


Fig. 3.—Eyeball forced downward well outside of lids.

to do his work properly. He became very much depressed and "blue"; was worried about his mental condition, homesick, and anxious to return home. He became careless of his personal habits, was forgetful and unable to perform simple duties. He stated that previously people had called him insane.

Since his admission to the hospital his condition has remained about the same. When admitted his pupils reacted to both light and accommodation. A history note dated Jan. 18, 1913, records the patient's mannerism of holding his hands to the side of his head and, in a characteristic way, with finger-tips pressing the lower lids downward, exclaiming, "Doctor, I am just an old, crazy bum, that's what I am."

About six or seven months ago the patient began to devote attention to his left eye, and, by pushing the index-finger in beside the eyeball, the conjunctiva and muscles were gradually stretched until he was able to force the globe out of the socket. To do this seemed to afford him a certain amount of satisfaction, and that eye became his plaything. It was not many weeks before he was able to extrude the eye as shown in Figures 2 and 3.

I first examined this patient about three months ago. The left eye, in a quiescent state, was slightly more prominent than the right, projecting about 4 mm. beyond the plane of the latter. The pupils were about equal in size and regular in shape. The right pupil responded normally to light and accommodation. The left pupil responded to light consensually

One of the most difficult features to understand in this case is how the muscles retain their tone, after all the stretching to which they have been subjected. So far no attempt has been made by the patient to displace his right eye.

The Farragut.

A CASE OF INFANTILE UTERUS AND APPENDAGES WITH RESULT OF TREATMENT

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Patient.—Mrs. M., white, aged 27, married five years, has never been pregnant, and is anxious to have a child.

Examination.—General condition good, muscular, not fat; figure like that of a boy of 18; narrow hips, undeveloped breasts. Heart and lungs normal. Uterus about size of English walnut, ovaries not palpable. (Has been examined by gynecologist who told her she could never have a child.) Pelvis normal. Has had menstrual show of a few drops three or four times during her life. Epistaxis very free at times. Sexual feeling very slight, if at all, and only very seldom. Several members of family have had menstrual disorders, but none of this type.

Treatment and Result.—April 6, 1912: Patient was put on extract of luteum tablets, one three times daily for a week,