

significance to this fact, until further observations have been made.

TABLE III.

*Kala-azar cases with doubtful or negative aldehyde reaction.*

A. R.		Serum-formalin mixtures.						
		2:1	1:1	1:2	1:3	1:4	1:5	1:6
+	—	—	—	—	3	5	4	1
±	3	—	—	3	1	—	1	4
—	2	5	5	2	1	—	—	—

A. R. = Standard aldehyde reaction.

*Conclusion.*—It will be seen that very diverse results are obtained by indiscriminate mixing of serum and formalin; these may or may not be in accordance with the results of the standard test. Hence in order to get the best possible result, the rule laid down by its originator, namely, of putting a drop of 30 per cent. formalin into 1 c.cm. of clear\* serum in a small test tube and then intimately mixing it by gently shaking, should be strictly adhered to. Although in this series when the serum-formalin mixture was 3:1, or more, the results obtained were almost identical with those of the standard aldehyde test, we do not recommend any departure from the originally-advocated proportions, because we are of opinion that this ratio of the reagent—and the ratio is after all the most important factor in all precipitation tests—is optimal.

The end result, which depends entirely on whether there is complete opacity, partial opacity (*i.e.*, clouding or opalescence), or no change at the end of 24 hours, should be noted and the results recorded as positive, doubtful or negative, accordingly, though in the case of a strongly positive reaction complete opacity will occur and the result can be read in about half an hour. It must be clearly understood that gel formation, which is popularly spoken of as solidification, is only an associated factor and when present by itself is mostly of negative value in the diagnosis of kala-azar.

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## REFERENCES.

Brahmachari, U. N. (1917). Fourth report on the treatment of kala-azar and some blood reactions in this disease. *Indian Med. Gaz.*, LII, 319.

Chopra, R. N., Gupta, J. C., and David, J. C. (1927). A preliminary note on the action of antimony compounds on the blood serum. A new serum test for kala-azar. *Indian Med. Gaz.*, LXII, 325.

\* Difficulty is said to be encountered sometimes in getting clear serum from the blood. But this can be very easily surmounted by washing out the syringe with normal saline just before taking the blood.

Napier, L. E. (1921). A new serum test for kala-azar. *Indian Med. Gaz.*, LVI, 338.

Napier, L. E. (1922). A new serum test for kala-azar. *Indian Journ. Med. Res.*, IX, 830.

Napier, L. E. (1923). Further experience with the aldehyde test. *Indian Med. Gaz.*, LVIII, 104.

Ray, C. B. (1921). Hæmolytic test in kala-azar. *Indian Med. Gaz.*, LVI, 9.

## A Mirror of Hospital Practice.

### A CASE OF HABITUAL FORMATION OF STONE IN THE BLADDER.

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A. R., aged 22 years, a resident of Jadura, a village in the Bhuj district of Cutch State, was operated on at Rajkot about 2½ years ago for a large stone in the bladder; this was his first operation. Suprapubic lithotomy was performed and the stone was about the size of a duck's egg, according to the description of the patient. He was discharged, cured, from the hospital. There were no complications; the suprapubic wound had completely healed and there was no fistula. Within three months of his return home, he felt the usual symptoms and experienced the same trouble in passing urine as before the operation. One day he noticed a minute hole in the scar-line of the suprapubic area, through which a few drops of urine trickled. This minute opening went on widening in course of time until in about a year's time it became very wide and most of the urine sprang out in a stream like a fountain; this happened most markedly when he lay flat on his back. He then sought admission in the Jubilee Hospital at Bhuj on the 6th of September 1929. On sounding *per urethram* which would admit a no. 14 catheter easily, as well as through the suprapubic fistula, the stony contents could be easily and distinctly felt. The patient was prepared for litholapaxy which is my operation of choice in such cases. As the patient had been operated on only 12 months previously it was presumed that the present calculus must be a new formation. It was hoped, therefore, that it would be of small size and easy to crush. Unfortunately it turned out otherwise. Not only was the calculus large, it was too big for any lithotrite that I could pass in up to no. 14; I had therefore to have recourse to suprapubic lithotomy. On opening the bladder and delivering the calculus it was found to be a big conglomeration of five component stones all massed together. The patient made an uneventful recovery.

On the 6th of April 1931, the same patient sought admission to the Jubilee Hospital again with symptoms of stone in the bladder. The presence of stone was confirmed on sounding and on the 13th instant he was operated on and the stone was removed. It weighed 2 drams and 45 grains. It was soft like its predecessors and it was composed of pure phosphates.

My object in reporting this case is to show the tendency of the patient's bladder to form stones at a fairly quick rate, which is rather unusual. I have no doubt that many workers in the field of urology must have met similar cases in their practice. It would be interesting to know their views on the causes of such rapid and frequent formation of calculi in the same subject.