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Difficulty in Cultivation of Endamoeba Histolytica.

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Reports describing the ease with which a number of workers[1] have cultivated *E. histolytica* have led me to attempt its culture.

Following the method described by Boeck and Drbohlav,[2] material obtained from 19 patients with proved *E. histolytica* infection was inoculated into their L. E. S. medium. The material obtained from 15 patients showed vegetative forms of ameba only; from 2 patients encysted forms of ameba only; and from 2 patients both encysted and vegetative forms of ameba. The results of these inoculations are embodied in the following table:

TABLE I.

Material used for inoculation	No. of patients	Growth of ameba	Life of culture in days	Successful subcultures
Inoculum containing vegetative forms of amoeba only.				
Bloody mucoid stools	15	0	0	0
Scrapings from ulcers	12	2	1	0
Bloody mucoid stools after 24 hours in ice box	4	0	0	0
Tissues removed at necropsy	1	0	0	0
Tissues removed at necropsy treated with alkali	1	0	0	0
Tissues removed at necropsy treated with acid	1	0	0	0
Tissues removed at biopsy	1	0	0	0
Inoculum containing vegetative and encysted forms.				
Bloody mucoid stools	2	0	0	0
Inoculum containing encysted forms only.				
Semi-solid feces	2	0	0	0
Concentrated fecal washings	2	1	1	0

[1] Craig, C. F., and St. John, J. H., *Am. J. Trop. Med.*, 1927, vii, 39.

[2] Boeck, W. C., and Drbohlav, *Am. J. Hygiene*, 1925, v, 371.

Treatment of the ameba containing material with refrigeration, with acid, and with alkali, was done in an attempt to enhance their resistance and to cause them to encyst. In the few instances tried, the treatment proved to be of no value.

Five tubes of media as a minimum were inoculated in each attempt to cultivate ameba from a given patient. Where amebic growth occurred, it was found in at least 2 of the tubes inoculated.

The initial pH of the media varies between 6.8 and 7. The average pH at the end of 24 hours incubation from the cultures from 5 patients was 6.4; at 48 hours 5.6. A pH value of less than 5.4 was never encountered. Protozoal life could not be demonstrated at a pH of less than 6.2. Reinforcement of the buffer value of the serum by the addition of dibasic sodium phosphate did not materially affect the hydrogen ion concentration. The addition of washed human red cells showed no effect on the growth of the ameba or the reaction of the media. The addition of calculated amounts of alkali at short intervals, in the cultures from 2 patients maintained the pH only temporarily but did not affect the growth of the ameba.

Simultaneous inoculation of media with infected material and an alkali producing organism (probably *B. alkaligines*) obtained from the culture of stools in the cultures from 4 patients resulted in a less rapid swing of the pH to the acid side and maintained as a final acid figure the pH 6.2.

The small series of cases above reported demonstrates the difficulty encountered in the cultivation of *E. histolytica*. Some improvement, however, is noted in Dobell's[3] modification of Boeck and Drbholav's medium, as there is at present an undoubted culture of *E. histolytica* growing in the laboratory, on the latter media, through 4 successive subcultures. Attempts to grow this organism on the first media used have been futile.

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Surgical Relief of Pericardial Adhesions: An Experimental Study.

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The operative procedures employed today to relieve symptoms produced by pericardial adhesions consist of (1) removing the

[3] Personal communication from Dr. F. M. Johns.