sive myocarditis and the wall of the ventricle was very thin at one place.

These cases would seem to be of considerable interest in view of all the recent clinical and experimental work that has been done to prove that the coronary arteries are not end arteries, as was at one time supposed.

680 Madison Avenue.

A PRELIMINARY NOTE ON SPIROCHAETA PALLIDA AND LIVING TISSUE- CELLS IN VITRO *

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Having successfully applied Harrison's method of tissue growing *in vitro* to the cultivation of the virus of vaccinia,¹ we have here tried the same method with the *Spirochaeta pallida*. In the present experiment the organisms used were from a culture obtained from Dr. Noguchi. He has kept it growing for some length of time and states that it has lost most of its virulence.

Hanging-drop preparations were made of small pieces of the testes of the rabbits inoculated with spirochetes, to which rabbit plasma was added. The preparations were incubated at 37 C. (98.0 F.). Before incubation preparations examined in the dark field did not show spirochetes nor did those examined during the first few days of incubation. Evidently very few spirochetes were inoculated. The cells of the testes, however, showed a good growth.

After incubation for twenty-five days examination with the dark field showed many organisms. These were extremely motile. Short forms found strongly suggested multiplication of the organism and not merely a survival of the original inoculation. The early negative examinations would also suggest a multiplication.

The organisms were inoculated into the testes of a rabbit and the virulence will be reported later. It seems possible by this method of growing avirulent cultures with living cells and transferring them to fresh cells to restore their pathogenicity. This would be in line with the increase of virulence found in bacteria submitted to the action of immune serum. Further experiments are now being made in this direction and also on the direct inoculation of spirochetes from syphilitic lesions.

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THE PREPARATION OF ALBUMIN MILK IN THE HOME

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The value of albumin milk as a therapeutic agent in the nutritional disturbances of infancy has been fully established. The difficulty of its preparation has curtailed its use very much.

The original directions for its preparation called for a quart of sweet milk brought to the boiling point, allowed to cool to 100 F. and then curdled with a tablespoonful of essence of pepsin. The whey is drained off and the curds suspended in a muslin bag for two hours. The curds are then passed through a hair sieve by gentle pressure with a large spoon

or potato masher adding at the same time a pint of fat free buttermilk. Boiled cool water is then added to bring the whole up to one quart. The preparation is then ready for the addition of from 1 to 5 per cent. of maltose and dextrin.

The main difficulty is in getting the curds to pass through the sieve. In our institution we prepare from 10 to 15 quarts a day. This formerly was a huge task and would consume anywhere from one-half to two hours. And still the product could not be considered ideal. As the result of mashing the curds through the sieve, the fat separates out in the form of butter and your infant is robbed of many calories that he ought to be getting. Recently some have the curds prepared from skim-milk instead of whole-milk. This in some instances might be desirable but in a large group of infants we desire the mixture to contain fat.

METHOD

At St. Ann's Infant Asylum we have found a method of reducing very much the time and labor. The following are the directions in detail:

1. Bring a quart of sweet whole-milk to the boiling point; raw-milk is not used as its curd is much tougher.
2. Cool to 100 F.
3. Add one tablespoonful essence of pepsin and allow to curdle.
4. Pour off the whey and suspend curds in muslin bag two hours.
5. Stand bag containing curds in 8 ounces boiled cool water for one hour. This is very important and is the secret to the success we have had in the preparation of this food.
6. Remove the bag from the water, allow as much water to drip as will and place curds in sieve.
7. Add pint of fat-free buttermilk to sieve containing curds, and stir; it will be found that the curds will pass through in two to three minutes, which must be repeated three or four times.
8. Turn the bag inside out and return to the 8 ounces of water so as to obtain all the curd.
9. Pour in the sieve the 8 ounces of water which was used to soak the curds.
10. Add enough water so that the whole measures a quart.
11. Add the percentage of maltose-dextrin desired and put on ice.

We are able to prepare 10 quarts of this food after the curds have drained and soaked in less than ten minutes with the minimum separation of the fat.

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A CASE OF ANEURYSM OF AORTA RUPTURING INTO THE VENA CAVA

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History.—D. S., bachelor, aged 70, 6 feet in height, weight 220 pounds, with negative family history, denying syphilis, had never been ill until several months previous to the time I first saw him, Feb. 21, 1911. During those months he became short of breath and had pain in the front part of his chest when climbing the hill to his home and had been treated for asthma. When I first saw him he had severe pains in his chest and was so short of breath that he could not walk across his room. He was chiefly anxious because his eyelids, face and hands were swollen, and his tongue seemed thick.

Examination.—Patient was dyspneic, his face, neck, arms and upper part of his chest swollen and cyanosed, with edema over the exposed bony surfaces. The external jugular veins were full, but no pulsation could be detected. Superficial veins of upper chest were plainly visible. The rest of the body was neither edematous nor cyanotic. There were no visible pulsations. There were distinct diastolic shock over great vessels at base of heart, and heart dullness on the right at the right edge of the sternum and on the left at the mid-clavicular line in the second interspace and 2 cm. outside of midclavicular line at the fourth interspace. Apex beat was

* From the Research Laboratory, Department of Health, New York.

1. Steinhardt, Israel, and Lambert: Jour. Infect. Dis., 1913, xiii, 294.