The amount is usually smallest in the male intergrade with the larger number of female characters; and usually males with a single female secondary sex character produce fewer sperm than normal males. The female intergrades with one or two male secondary sex characters usually possess a high fertility, those with as many as four or five male characters are in general much less prolific, while those with six or more male characters are usually sterile or nearly so. The hermaphrodites are frequently sterile, though some are moderately prolific. The normal females within the sex-intergrade strain produce representatives of the entire sex array. In general however the female intergrades with several male secondary characters produce a higher percentage of males and male intergrades than either the normal females or the female intergrades with few male characters.

Sex here appears as a purely relative thing. There occurs practically every gradation from the entirely normal female with a full complement of female secondary sex characters; through female intergrades of all sorts; hermaphrodites, with various combinations of secondary sex characters; and male intergrades of various rank; to normal males with all the primary and secondary sex characters distinctly and strongly male.

3 (1181)

Cardio-respiratory involvement in infantile scurvy.

By **ALFRED F. HESS, M.D.**

[From the Board of Health Laboratories, New York City.]

Infantile scurvy is commonly regarded as a disorder which affects the blood vessels and the bones. In previous communications it has been shown that this view is too narrow, that the heart is frequently enlarged, the deep reflexes exaggerated, and that there may be changes in optic discs. In the present communication we wish to point out that even in moderate instances of infantile scurvy, there may be found marked polypnea and tachycardia. The accompanying chart illustrates this condition and demonstrates likewise its scorbutic nature by the promptness with which it reacts to antiscorbutic diet, to orange juice or to potato.

This pathological syndrome evidently is due to an involvement of the pneumogastric. It is interesting as another proof of the important part which the nervous system plays in this disease,

and in associating it still more closely with other so-called "deficiency diseases" such as beriberi and pellagra, in which the disturbances of the nervous system seem to be primary in nature.

4 (1182)

On the question of the transformation of fibrin into fibrous tissue in tissue culture preparations.

By R. A. LAMBERT, M.D.

[From the Pathological Laboratory of the Presbyterian Hospital, New York.]

During the past year there appeared a paper by Baitzell¹ working in Professor Harrison's laboratory at Yale University describing changes in the fibrin clot of tissue culture preparations, which he interpreted as a transformation of the fibrin meshwork into fibrous tissue. Extending his observation to the living animal this author has described² in the healing wounds of frogs similar changes in the fibrin which early fills the wound and concludes that instead of forming a temporary scaffolding to be removed

¹ Baitzell, *Jour. Exper. Med.*, 1915, XXI, 455.

² Baitzell, *Jour. Exper. Med.*, 1916, XXIII, 739.