

and the edible part of the litchi nut was given in doses of 1 and 2 grams daily (0.87 to 1.74 grams dry matter).<sup>\*</sup> The material was not always eaten completely, and the food consumption was irregular during this period. In no case was the ophthalmia cured, nor did the body weight increase. When 6 to 10 drops of cod liver oil were given with 2 grams of litchi nut, growth was secured, and the ophthalmia disappeared in 5 to 8 days.

In the test for vitamin B, the rats, after consuming the basal ration for approximately 2 weeks, ceased growing, and litchi nut was given in doses of 1 and 2 grams daily. There was not the slightest effect in checking the loss of weight, although the material was well consumed. In view of the usual prompt though temporary response of rats to even traces of vitamin B under these conditions, the observed behavior of the experimental animals in the present tests indicates that the litchi nut contains little, if any, vitamin B. When 200 milligrams of dried yeast were given with 2 grams of litchi nut, growth at the normal rate was resumed.

It is thus apparent that, while the fruit contains ineffective quantities of vitamins A and B, it is not toxic as has been stated in the Chinese Materia Medica (See also Read<sup>1</sup>). On the other hand, the dried litchi nut as obtained on the American market and as used in these experiments, constitutes an exception among edible fruits in its lack of the two food factors, especially vitamin B.

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<sup>\*</sup> The edible portion showed 12.6% loss in weight when heated for 120 hours, at 60° C., in a vacuum oven.

<sup>1</sup> Read, B. E., *J. Am. Chem. Soc.*, 1918, xl, 817.

<sup>2</sup> Osborne, T. B., and Mendel, L. B., *J. Biol. Chem.*, 1918, xxxvii, 557.

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#### Variations in Auriculoventricular Conduction Time in Rheumatic Carditis with Salicylate Therapy.

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It is now generally believed that the drugs employed in the treatment of acute rheumatic fever (sodium salicylate, acetylsalicylic acid and neocincophen) probably exert an antisymptomatic rather than a specific action in this disease. Following their administration, the pain and exudation of arthritis are usually controlled, high

fever is reduced, the heart rate becomes slower and there is often a concomitant fall in the leucocyte count. The mechanism by means of which these results are accomplished, is not understood.

No direct effect of medication upon the cardiac lesions of rheumatic fever has been demonstrated. Auscultatory signs do not afford an accurate index of slight modification in a valvulitis. Electrocardiographic evidence of myocardial involvement is frequent; and the most readily measurable graphic change is auriculoventricular conduction time (P-R interval).

In three cases of acute rheumatic carditis with arthritis, prolonged P-R interval (0.23-0.24 seconds) was found on admission to the hospital. No digitalis had been given to any of the patients. Fever, tachycardia and slight leucocytosis were present in all. Salicylate, in the form of sodium salicylate or aspirin, was administered in courses, with an interval of from six to nine days between them. During this interval all drugs were withheld. Following the institution of salicylate therapy, the usual effects on arthritis, temperature, pulse and leucocyte count were experienced. In addition, there was a gradual reduction in the duration of the P-R interval to within normal limits (0.20 seconds or less). On discontinuing salicylate, the conduction time increased beyond the upper limit of normal, in one instance becoming longer than on first examination. The reappearance of fever, tachycardia, leucocytosis, and in two instances, arthritis, afforded further evidence of the recrudescence of acute infection. A second course of salicylate was again followed by the subsidence of these signs and by a shortening of A-V conduction. There appeared to be a definite relationship between variations in conduction time and salicylate medication.

In a number of cases of partial heart block occurring in the course of rheumatic fever, post-mortem examination of the A-V bundle has disclosed characteristic inflammatory lesions involving the fibres of this structure. It has been emphasized by Swift<sup>1</sup> that it is predominantly the exudative manifestations of rheumatism which are modified by antirheumatic drugs. In the cases here described, it is conceivable that salicylate caused diminution of edematous infiltration in the region of the bundle, with resultant shortening of conduction time.

These observations suggest the conclusion that in certain cases of acute rheumatic fever with myocardial involvement, as evidenced by prolongation of A-V conduction time, administration of salicylate exerts a favorable effect upon the lesions in the heart muscle.

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<sup>1</sup> Swift, H. F., *Am. J. Med. Sci.*, 1925, clxx, 631.