

ly suggested the Friedlander group. Capsule stain from the subculture was negative but intraperitoneal inoculation in the white mouse yielded typical capsulated bacilli. The mouse was very ill when killed at the end of 18 hours. Gelatin was not fluidified. The organism was definitely a member of the Friedlander group. As the only physical finding suggested the possibility of a lung lesion the isolation of the bacillus pointed to that region as the most likely diseased area. The X-ray examination on March 26 showed marked density of the right upper chest from the second to the sixth rib. On March 30 this density had decreased to a mere cloudy appearance.

After a most stormy career for six days during which time the temperature reached 106.8°F., there was a rather sudden change for the better and the patient made a rapid recovery.

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### Thyroparathyroidectomy in the rabbit.

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In reviewing the literature on the parathyroids, one is struck by the lack of agreement in the results obtained by different experimenters following complete removal of the glands, in animals of the same species. For example, Gley, in 1892, when he rediscovered the parathyroids, in his first series of experiments on rabbits, removed the thyroid and parathyroids from sixteen animals. In fourteen of these acute symptoms developed very rapidly and death followed within a day or two. In the same year Moussu repeated Gley's experiment on rabbits and of the eleven individuals on which he performed the complete operation not one showed the acute tetany described by Gley.

In late August and early September 1920, the writer thyroparathyroidectomized seventeen half-grown rabbits, keeping six of the same litters as controls. Of the seventeen, one died within

twenty-four hours in acute tetany, another succumbed in two days and the remaining fifteen lived for months. Some were killed for want of space, and several that were allowed to live showed the chronic changes which follow thyroidectomy.

In January, 1921, the same operation—complete thyroparathyroidectomy—was performed on twenty-four rabbits, most of them adults. Five died in tetany one day after the operation—tracings of the muscular contractions were obtained from two,—four died on the second day, six had succumbed between the second and the tenth days, one on the eighteenth day, and the remaining eight lived until they were killed months afterwards. In this second series the proportion showing acute symptoms was much greater than in the first.

Accessory parathyroid tissue is said to be present in the rabbit fairly frequently. This is small in amount, no doubt, but the first explanation one thinks of to account for the survivals is that some of this tissue has been inadvertently left behind. In the light of work recently reported by Dragstedt and by Luckhardt, however, another explanation is suggested. These observers found that in the dog the symptoms could be controlled by the diet. The toxic substances leading to tetany, they believe, are produced chiefly in the gastro-intestinal tract, arising through the activity of the proteolytic group of intestinal bacteria, and are probably, for the most part protein split products of the nature of amines. A diet rich in proteins is contraindicated therefore, and putrefactive changes in the intestine are to be prevented.

The diet of the first group of rabbits consisted almost entirely of green clover, while in the case of the second group it was mainly oats and cracked corn, although small quantities of cabbage were included. This dry feed would probably be richer in protein and would also tend to induce constipation and so putrefactive changes. This may conceivably account for the high proportion of acute (parathyroid) cases in the second or winter-fed group.