

## Medical Matters.

### ACUTE OVERSTRAINING OF THE HEART.

Professor Schott, of Nauheim, who delivered the opening address of the winter session at the London Post Graduate College, took for his subject "A Renewed Research on the Subject of Acute Overstraining of the Heart," which is reprinted in full in the *Lancet* of December 11th. He said in part:—

"While in the first half of the last century the valvular affections of the heart, with their train of symptoms, received the almost exclusive attention of the medical world, the chronic diseases of the cardiac muscle, and, above all, its functional disturbances, became later the subject of much closer investigation. The organic changes in the heart muscle were, in many cases, not difficult to determine, either macroscopically or more especially under the microscope, but it was otherwise in the case of those disturbances which we denote as purely functional. And it was here that—as must be familiar to everybody, especially in this country—the pioneer work of Peacock, and his observations on Cornish miners, acquainted us with the true character of cardiac overstraining. From that time forward this chapter of cardiac pathology has never ceased to command the sustained and watchful interest of the medical world. Furthermore, the great development of athletic sports, which has taken place during the last two decades, especially here in England, has greatly increased the number of cases of cardiac overstraining which in consequence come under medical observation.

"These observations of Peacock were confirmed later on by the investigations of Myers, Clifford Allbutt, Da Costa, Johann Seitz, Münzinger, and others. Nevertheless, knowledge of the true facts concerning overstrain of the heart could only win its way very slowly, for many declared themselves to be definitely opposed to the new teaching, whilst others spoke with very great caution, and made known to the world their manifold doubts on the question."

Professor Schott proved by experiment prior to 1890 that bodily overstraining can produce alterations in a healthy heart in young, robust individuals free from any anomaly of the heart whatever. In one of these experiments two young men were made to wrestle with one another, resisting or lifting each other, until a high degree of dyspnoea had been produced by the previously increased muscular straining. "In a second series of experiments, in order to increase the dyspnoea and render the cardiac action still more difficult, I fitted,"

says Professor Schott, "a leather belt close under the costal arch of the subjects, and made them wrestle while thus hampered. In both series of experiments I actually did find that, when such severe physical overstrain leads to dyspnoea, the heart undergoes a greater or lesser amount of dilatation. This I designated as acute cardiac dilatation, which, of course, is to be regarded as a temporarily abnormal, but not as a pathological, condition. This, as I mentioned at the time, is evidenced by the fact that in healthy, robust persons such an artificially-produced cardiac dilatation can generally recede entirely within a very short time, often in one or two minutes." Observations by means of the Roentgen Rays confirmed those made by percussion.

Is it possible for a healthy heart muscle to hypertrophy from an excess of work?

If this question be answered in the affirmative, Professor Schott considers the question would also be answered whether an excess of work will cause a heart muscle to dilate, since nowadays there is hardly a divergence of opinion regarding the theory that dilatation is the primary, hypertrophy the secondary, lesion. He considers that the old view of Fraentzel to the contrary may now be considered as controverted, while that of Thurn, Jürgensen, J. Bauer, and others is, with few exceptions, generally considered to be correct.

Summarising his conclusions, the Professor said:—"I am firmly convinced that every physician, especially here in England, who has the opportunity to observe a considerable number of cases of heart affections will easily find confirmation of the fact that in individuals previously normal, and solely through the most different forms of overstraining, the heart may be brought first to acute dilatation, and, finally, through its repetition, to permanent dilatation with all its consequent phenomena."

### THE ETIOLOGY OF BERI-BERI.

The Government of the Federated Malay States, where thousands annually fall victims to beri-beri, some little time ago authorised an enquiry into the etiology of the disease, which was conducted by Dr. Henry Fraser, of Aberdeen, Director of the Institute of Medical Research in the Colony. Enquiry was directed to the question of whether, if other factors were excluded or controlled, people fed on white rice developed beri-beri, while those fed on other varieties or on rice which had been parboiled remained immune. It was clearly demonstrated by the result that men fed on white rice develop beri-beri, and those fed on parboiled rice do not. For the purpose of the enquiry two parties of men working under similar conditions were selected.

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