

Munich, May 27, 1890.

Dear R.: (Pfeiffer) Professor Gaule used the projection lantern very frequently, and as it is arranged that the light is thrown from behind

At Zurich we found Professor Eichhorst just about to go off for the day, but he very kindly took us through wards full of instructive cases, among which were very many of pneumonia, which he said was almost epidemic. There are special pavilions for contagious diseases, and we were very much interested to see, for the first time, the cases of phthisis isolated, a plan which had been carried out here for some years. Perhaps in old hospitals with insufficient ventilation this precaution may be necessary, but the experiments of Cornet show that the bacilli are not always present in the dust of wards in which there are patients with phthisis. The question is one attracting a great deal of attention in Germany, and I send you a paper by Professor Finkelnburg, of Bonn, in which he advocates strongly the erection of public sanatoria for consumptives. Another pamphlet on this subject by Cornet - Wie schützt man sich gegen die Schwindsucht? - will also interest you. The main point which he makes is the prevention of the desiccation of the sputa by the stringent use of spit-cups and the proper disinfection of the same. Professor Eichhorst's clinical laboratories are large, conveniently arranged rooms, two of which are especially equipped for bacteriological and chemical work. The latter is in charge of a young chemist, not a medical man who makes reports on regular forms. This seems to me a great advantage, particularly when there are elaborate and complicated analyses to be made. Here, too, we found the system of hydrotherapy in use in the treatment of typhoid fever, and the mortality had been reduced to the extremely low point of five per cent.

Professor Klebs was away, but one of his assistants showed us the pathological laboratory. We were also very disappointed not to have seen Professor Forel, who was at the Montpellier festival. We spent a delightful day with Professor Gaule, the physiologist. He first demonstrated some of his remarkable histological specimens, particularly a series of the frog's testis at different months of the year, prepared by his method, which you will find in any of the recent histological manuals. Not only in the testis, in which, in certain animals, we should expect marked seasonal changes, but in other organs, such as the liver, he holds there are variations in the constitution of the cell protoplasm throughout the year. Mrs. Gaule, an American lady and a well-known histologist, is an active co-worker in the microscopical department of the laboratory.

I was still more interested in the brain of a dog which had had a remarkable experimental history. The center for the left foreleg was first destroyed, with the result of a paralysis, which gradually disappeared. Then the corresponding center in the right side was destroyed, with the effect of producing paralysis of the forelegs on both sides and loss of intelligence, so that the dog lost knowledge of his tricks and was, in fact, like a puppy. He regained power in the legs and was gradually re-educated, with, however, great trouble, by one of the lady students of the laboratory. Then a portion of the brain on the right hemisphere behind the left-leg center was removed, with the result of paralysis of the leg, after which the animal was killed. The experiment is chiefly of interest as showing substitution of function somewhat similar to that which took place in Barlow's celebrated case of aphasia in which the patient, after recovery from the effect of an embolus on the left middle cerebral, gradually regained the power of speech, which was again lost in a second attack, when an embolus plugged the artery of the right side.

In lecturing, Professor Gaule used the projection lantern very frequently, and has it so arranged that the image is thrown from behind the lecture room upon a glass screen behind the movable blackboard. I have never seen microscopic objects so beautifully projected, and the technique was carried to such perfection that even the movement of the ciliated epithelium could be seen from all parts of the room.

Munich is the largest of the three Bavarian schools, and I was particularly anxious to see the arrangements of the medical clinic, which were reported to be unequalled in Europe. Unfortunately, we came in the midst of the Whitsuntide holidays, when the lectures had ceased and the laboratories were deserted. Professor von Ziemssen (whose name is one of the most familiar to the profession of English-speaking countries) was at home, and very kindly showed us the clinical institute, which is attached as a wing to one side of the main hospital building. It was erected in 1878, and when I tell you that the cost was over \$50,000 you will have some idea of its extent. The ground floor is devoted largely to outdoor medical work - the ambulatorium, as it is called - and to rooms for the assistants and docents, with suitable arrangements for demonstrations and classes. The second floor has the professors' private rooms, the library, a room for the records, the auditorium, a large chemical laboratory, and a series of four rooms communicating with each other for microscopical, bacteriological, and electrical work. The institute is unusually rich in apparatus for experimental research, and going from room to room and listening to the description of treasures of all sorts for clinical investigation, I realized, as never before, what the Queen of Sheba felt when she said, after seeing the treasures of Solomon, "that there was no more spirit in her." The files of the Deutsches Archiv für klinische Medizin for the past twelve years show a record of good work of which the director of the institute may well feel proud. The hospital notes are very carefully kept and pigeon-holed, first by months, then at the end of the year bound loosely according to the disease. With an index of the names and another of the diseases, any case can in this way be referred to in a few minutes. Of models we were shown a number illustrating the alterations in position and size of the stomach - some in plaster, others in papier-maché. Dilatation of this organ is very much more common here than with us, owing to the enormous quantities of beer consumed. Some of the men connected with the breweries are said to drink from twelve to twenty litres daily. Voit makes the statement that the average consumption of beer in Munich is two litres and a half per capita daily. It is cheap and good, a litre costing only twenty-four or twenty-six pfennigs; and when one sees the crowded state of the beer-houses at all hours of the day, Voit's estimate appears very moderate. The influence of the beer is shown in another way - viz., in inducing hypertrophy of the heart, upon the frequency of which in Munich and on its association with beer drinking Professor Bollinger has recently written. Von Ziemssen thought that it was the combination of hard work with heavy drinking that rapidly raised the aortic blood-pressure and was so dangerous. The cases were met with chiefly in those whose occupations necessitated great muscular exertion, such as draymen and porters. Though less common, these cases are by no means rare in our large cities among men who work hard and who at the same time drink heavily.

Within the past ten years Munich has gradually acquired a thorough drainage system, and we were shown a set of charts in course of preparation for the Berlin Congress, illustrating the remarkable reduction in the number of cases of typhoid fever. In certain sections of the city, formerly much affected, the disease is now almost unknown. The chart showing the hospital experience during this period follows the same falling curve. Munich is now one of the healthiest of the continental cities, whereas it formerly had an exceptionally high death-rate, particularly from zymotic diseases. The medical wards are in the part of the hospital adjoining the clinical institute, but, as the building is very old, the arrangement of the rooms is not very satisfactory. A new surgical department is nearly completed. Professor von Ziemssen lives in a separate house within the hospital grounds, so that he is not far from his work and can readily, as he expressed it, stand like a colossus with one foot in the wards and the other in the laboratory. It is a pleasure to think that one who has done so much for the profession is so well provided for and has everything that a teacher or investigator could desire or deserve.

We took advantage of the vacation and went to Ober-Ammergau to see the Passion Play. The crucifixion scene is frightfully realistic, every detail represented, even to the piercing of the side, from which the blood - an aniline fluid, I suppose - flows freely. A problem, much discussed of old, why Christ should have died after so comparatively short a time upon the cross seemed to my mind to receive its solution in the mental and physical exhaustion consequent upon the trials of the preceding twenty-four hours. There is a remarkable book dealing with this subject by Dr. Stroud, Theory of the Physical Cause of the Death of Christ, in which he argues that it was due to rupture of the heart; but this would be highly improbable in a vigorous, healthy man of thirty-three.

In looking over the Passion Play literature, we find a long account of the performance in 1830 by Oken, the anatomist, and it was extremely interesting to find that this description of the play as given sixty years ago might have been written of this year's representation.

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