of disease except those derived from examination of the urine.

Let us then examine this man's urine, a specimen of which I show to you. As you see, it is pale and evidently of low specific gravity. The urinometer shows that it is 1012, but I expected from its paleness to have found it still lower, even as low as 1005. Urine of low specific gravity associated with swelling of this kind is of more or less significance and means that the disease is of the sub-acute or chronic form. Of course urine of a low specific gravity may be found in other conditions, particularly functional nervous derangements, but in Bright's disease a low specific gravity indicates that the inflammation has passed beyond the acute stage. The application of the ordinary heat and nitric acid test for albumen reveals its presence in considerable quantity. For practical purposes it is sufficient to indicate the quantity of albumen, when small, by the term faint opalescence; when the quantity is larger, by the term milkiness, and when the quantity is still larger by stating the proportion which the bulk of the precipitate bears to the bulk of urine tested, and for this purpose it is desirable to have a graduated test tube and to set the urine aside for a few hours in order that all the albumen may settle. The albumen will then be said to equal one-eighth, onesixth, one-fourth, and so on, of the bulk of urine. Let me caution you against a commoner error. Not unfrequently urine which contains one-fourth of its bulk of albumen is put down as containing 25 per cent. of albumen. The expression 25 per cent. means 25 per cent. by weight, but the absurdity of such a statement will be seen when it is remembered that the blood contains but little over 5 per cent. albumen. Urine which contains 5 per cent. of albumen becomes solid on the application of heat. Urine which contains one-fourth its bulk of albumen probably contains about 5 per cent. of albumen. In the present case the urine contains perhaps about one per cent of albumen. Examination of this urine with the microscope shows that it contains hyaline-casts to which are attached a number of leucocytes, granular casts which are both moderately and highly granular and compound granule cells. I do not find on the one hand any blood casts, and on the other hand I fail to find a single fat cast. The casts which are particularly valuable in distinguishing any variety of disease are wanting. We cannot therefore rely much on the urine in making the diagnosis. think that acute Bright's disease may however be excluded by the urine examination alone, and independently of the history. There is, however, nothing to show that the disease has passed to the chronic stage. What conclusion therefore is justifiable? This is important, because both the treatment and the prognosis depend on it. From the evidence at our disposal, I should say that this was a case of sub-acute Bright's disease. It is. however, a nice question to decide where to draw the line between acute, sub-acute and chronic Bright's disease. The advance made by some cases toward the anatomical characters of chronic disease is more rapid than in others.

If this man's kidneys could be seen, it would probably be found that they were enlarged, that the cortex was widened and that the uriniferous tubules were filled with desquamated, degenerated epithelium. The kidneys would be pale, because the dilated tubules, taking up more space than in health, squeeze the blood out of the capillaries and because the cells have undergone this degenera-At the same time, this is not the typical tion. large white kidney in which there are large areas of fatty degeneration. In such cases, the tubules contain not only granular matter, but also large oil drops. In the typical large white kidney numerous white spots, whiter than the rest of the region, are found both in the cortex and on the surface after the capsule has been removed. If these are picked out with a needle and examined with the microscope, they will be found to consist of tubules filled with oil drops. I think that this stage has not yet been reached in the present case.

Even in this stage, the prognosis is comparatively favorable. In the acute stage of Bright's disease it is well-known that the prognosis is quite favorable, for a large majority of such cases, if taken in time and properly treated, will recover. As the case becomes sub-acute the difficulties of treatment increase. In chronic cases the probabilities of recovery are very much diminished. In this case, we may hope that the improvement which has begun will continue.

Before speaking of the treatment I shall refer to the etiology of this particular case. This boy has not had scarlet fever. This is important for by far the greater majority of cases of acute Bright's disease are the result of scarlet fever, and many cases of chronic Bright's disease are due to the same cause. Are there other causes of this affection on which we can lay our fingers? There are a few, and one of these, although perhaps not worthy of the second place, is malarial poison. There seems reasons for believing that the long-continued irritation of malaria is a cause of chronic Bright's disease. At least chronic Bright's disease is more common in intensely malarial districts. I, however, think that it is only in districts where the poison is more than usually intense. This may be said to be the case along the river banks where the patient has worked. Another cause of chronic inflammation of the kidneys is long-continued exposure with frequently recurring wetting of the feet and chilling of the body. Still another cause of this affection is the use of alcohol, but in such cases it is difficult to say how much is due to the direct action of the alcohol and how much to the exposure which necessarily accompanies such indulgence. There are other poisons which, when introduced into the blood are capable of producing this condition. Among these may be mentioned the long-continued use of arsenic and the inhalation of phosphorus to which workers in