

SELECTED MATTER..

MEDICINE.

DR. GOLDING BIRD, ON THE SOLIDS OF URINE.

In a paper published in the *Medical Gazette* two years ago, I pointed out, for the first time, the importance of determining the amount of *real urine* passed by a patient. By this term, *real urine*, I understand the solid elements of the urine, as distinct from the water in which they are dissolved. Water, although an important, is not an essential element of the urine: it may be excreted by other emunctories; but not so the matters dissolved therein: these seem, except in mere traces, to be only able to escape from the body at the outlet afforded by the kidneys, and indeed, from a structure of those glands distinct from that which pours out the water. In the paper alluded to, I pointed out the mode of determining this important question at the bed-side, and hinted at the results which would probably be obtained by it. From that moment I have never lost sight of the inquiry, and one among many of the results flowing from it I now shall bring forward.

[After remarking upon the importance of first ascertaining the quantity of urine secreted during the twenty-four hours, Dr. Bird proceeds to say:]

The characteristic function of the organs under consideration must undoubtedly be regarded as the excretion of highly nitrogenised matters derived either from the wear and tear of the animal tissues, or from imperfectly assimilated food. Therefore, to obtain a measure of the amount of integrity from this great depurating function, we must not only measure the urine, but calculate with tolerable accuracy the amount of solid matters really existing in it. This can, of course, be effected by the evaporation of a given quantity to as dry an extract as can be obtained. The practical difficulties attending this process are familiar to every one who has ever performed the task; and, moreover, the time required for its performance would preclude its being had recourse to sufficiently frequent to be of any real service. I have elsewhere noticed the objections to this mode, as well as the advantages presented by the more rapid and easy determination of the quantity of solids from the specific gravity of the urine.

Although ready to admit that this mode of calculating the quantity of solids is not susceptible of rigid accuracy, still I maintain that the total error existing in a series of observations thus made, will be far less than if actual evaporation of the urine was performed; and farther, the large number of observations capable of being thus made by every one, amidst the fatigues of large practice, render it of infinitely greater value than a process which requires time and practical skill for its performance.

The following table presents us with a mode of recollecting the quantity of solids existing in urine of different specific gravities, when the table is not at hand for reference—a piece of short memory of no small service in practice. Thus, if the specific gravity of any specimen of urine be expressed in four figures,