

first attack and with equally satisfactory results; excepting that recovery has been less rapid and less uninterrupted than he anticipated.

No special recommendations of a general hygienic or dietetic nature have been given in the meanwhile to the patient, who, in the course of the winter is seized with a third attack. On this occasion the symptoms are of a more serious, though similar nature; there is more marked and, perhaps, more localized abdominal pain; and the advisability of seeking a surgical opinion may suggest itself.

Clinical medicine here, we see, has been unable to arrive at an accurate diagnosis; it has neither suspected nor foreseen any complication, and has proved incapable of instituting definite measures of a preventive nature. Can the newer pathology do any more? Can general physiology, coming with its more searching methods to the help of the scientific physician, can general physiology do any more? Let us enquire. We will again make a supposition. We will assume that our patient at some previous time, has been advised, with the view of investigating his constitutional tendencies, to have performed a complete bio-chemical urinary analysis. This analysis we find displays as its essential feature, a diagram or graph constructed in the following form:

Urine of Mr. O—, April 18th. 1903.

Reaction acid.

Specific Gravity at 15°C., 1.021.

Coefficient of oxidation, 87.

Coefficient of phosphate, 20.

Biological Coefficient, 67.

(The Biological coefficient is only important for the chemist; it is used for establishing the normal units.)

#### ABNORMAL ELEMENTS.

Skatol, traces.

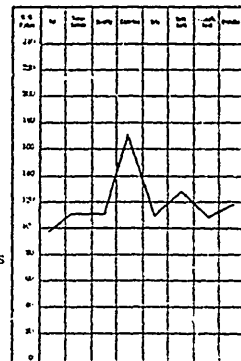
Indican, traces.

Oxalate of lime, a few crystals.

#### SPECTROSCOPIC EXAMINATION.

Absorption Bands: Urobilin and bile, faint.

#### NORMAL



(a) The normal is a mean between the theoretical and the actual weight of the patient; the theoretical weight being a fraction of the height, age and perhaps breadth of the subject (see Bouchard Pathologie Generale & E. Gautrelet, Physiologie)

We will further assume that the physician, now initiated into the principles that we are discussing, is able to interpret as follows the leading characteristics of the analysis and its curve. The volume of urine is normal; the total solids in slight excess,