

loss of voice, dyspnoea, and bronchitis. When the lymphatic glands are affected, there is more or less œdema in the cellular tissue; when the kidneys are attacked, albuminous urine; and when the mesenteric glands and mucous membrane of the intestinal canal are implicated, marasmus and colliquative diarrhoea. Under these secondary affections, the patient gradually sinks, and dies from exhaustion.

Drs. Danielssen and Boëck remark, that elephantiasis tuberculosa sometimes, but very rarely, occurs in an *acute form*, in which case the eruptive fever is violent, accompanied with delirium, and lasts from twelve to fifteen days; the eruption rapidly passes into the tubercular stage, the patches of erythematous skin becoming œdematous; the tubercles soften, and in a few weeks the disease accomplishes the progress of years. The disease may now subside into the chronic form, or, failing that, the patient may be carried off by pneumonia, pleuritis, or meningitis, in the course of a few days.

The *average duration* of elephantiasis tuberculosa, according to the same authors, is nine years and a half. Thus, of eighty-eight patients who died of this complaint in the Hospital of St. George, at Bergen, during the years 1840-47, one, between forty and fifty years of age, lived two years; while another, between twenty and thirty, dragged on a miserable existence for twenty-two years; and fifty-four out of the eighty-eight, nearly two-thirds, died between the periods of six and eleven years, both inclusive.

(To be continued.)

Contributions

TO

SURGICAL ANATOMY

AND

OPERATIVE SURGERY.

By R. KNOX, M.D., F.R.S.E.,

LECTURER ON ANATOMY, AND CORRESPONDING MEMBER OF THE IMPERIAL ACADEMY OF MEDICINE OF FRANCE.

TO MY FORMER AND PRESENT STUDENTS.

GENTLEMEN,—When I first became acquainted with the comprehensive yet vigorous method introduced by Bichât into the history of human descriptive anatomy, and contrasted the views of that great genius with the defective and irrational methods (to use no stronger terms) then prevalent in Britain, I could not but observe, that with these irrational and defective methods there was mingled up a something good and practical, meriting a better fate than the being tacked to courses of anatomical lectures, as they were usually called, but to which the name “anatomical” was wholly inapplicable. Practical surgeons in Italy, the land of solid discovery in mechanical science, in Germany, Holland, and England, were in the habit of considering certain regions of the body, more especially exposed to surgical operation, from a point of view wholly surgical; and this of necessity led to a most minute anatomical description of such regions, frequently including their physiological and pathological conditions, constituting, in fact, what we now term their “surgical anatomy.” In this spirit were composed the admirable monographs of Scarpa and Hesselbach. In England, also, there appeared about the same time many treatises, similar in character, but inferior in execution, to these. To say that Mr. Hunter clearly understood the true bearing of surgical anatomy is simply to assert what all now admit, that in anatomical science nothing escaped that wonderful man.

This mode of viewing the anatomy of man has for obvious reasons been long the favourite one in England. To view everything practically is the characteristic of the race. With men disposed by their nature to view all things from a solely practical point of view, the methodical, the systematic, the complete, fall naturally into abeyance, and even contempt. In the so-called anatomical lectures I attended when a student, the lecturer continually substituted the surgical and patho-

logical for the descriptive and elementary, teaching only what he was pleased to say “required to be known in practice,” thus unwittingly, no doubt, sapping the foundation of sound professional education in Britain.

But in calling this method irrational, I do so merely in an educational point of view. It is its abuse, not its use, which I censure. In a practical sense, to study and to re-examine many regions of the body, from a purely surgical point of view, is not merely rational, but essential, to those who would become distinguished, or even good surgeons. The object of the contributions I have now the honour to submit to you, through the first medical journal in Europe, is, first, to describe these surgical regions, if I may use the phrase, more minutely than simple elementary anatomy requires; and, secondly, to describe the mode of performing all the surgical operations which may be called legitimate.

When, after the cessation of hostilities in Europe, in 1815, the Continent became accessible to the British, and the sea-girt isle to the inhabitants of Continental Europe, English and foreign surgeons became for the first time after a long interruption acquainted with each other’s labours; the English slowly and with reluctance admitted the value of the methodical descriptive anatomy of Bichât, the value of which to medicine and surgery is scarcely yet admitted in England. The French surgeons quickly saw in our monographs on surgical anatomy a something good and practical, and, true to their mental character, they extended these monographs, elaborated them into a system, dividing the whole body into regions, each of which they viewed from a surgical point of view; thus departing, as I think, from the principle which must ever regulate practical works—namely, the strict adherence to what is *practical*, to the exclusion of system, method, order, and completeness. In Collis, Burns and Astley Cooper, Jacob and Bourguery, we have at once the extremes and the contrast.

Every region of the body may no doubt be viewed from a surgical point of view, seeing that operations require to be performed on all parts. But this is not the question. A correct knowledge of plain elementary descriptive anatomy is quite sufficient to guide the surgeon through most of his operations. But with others it is wholly different; and the regions in which these occur, constitute the only important surgical regions of the body. To examine these regions with a view to operation, it is not enough that the ordinary elementary anatomy be known to the surgeon. Minute mechanical relations of organs and parts of organs to each other become of unexpected importance when their surgical anatomy falls to be considered; pathological conditions interfere. These cannot be kept out of view, and the action and reaction of the living solids test unexpectedly the physiological knowledge of the surgeon. The minute description of such regions, and of such regions alone, constitutes “Surgical Anatomy;” all others may be treated of in the usual descriptive way.

The errors I have seen committed in practice (and they have been very numerous) do not all originate in the want of a knowledge of anatomy, strictly so called, but often in a misapprehension of the condition of the organs during life, of their physiological condition, if I may so say, and of their probable pathological state. It is not enough for the young surgeon to know the usual outline and boundaries of the inguinal canal, as he has seen them after death, when the muscles have ceased to act, and the brain and spinal marrow to feel; such knowledge will not enable him to operate, and such knowledge is not surgical anatomy as I view it. Mr. Liston himself, remarkable for his profound knowledge of the surgical anatomy of the body, fancied at one time that the inguinal canal and its apertures could not be relaxed *by position*, because Poupart’s ligament, running straight from bone to bone, could not possibly be affected by any change in the position of the limb. His ideas of the anatomy of this celebrated ligament were at the time drawn from some *dried preparations* in Dr. Barclay’s Museum. He lived long enough to correct this and many other errors.

Another object kept in view in the composition of these contributions is an endeavour to restore surgical anatomy and operative surgery to their proper and fitting place in medical education. Surgical anatomy is not a distinct kind of anatomy any more than operative surgery is a distinct kind of surgery. The sooner these errors are exploded the better.

I have dedicated this work, gentlemen, to you. When we were first acquainted you were mostly students; you are now surgeons and physicians, and must long ago have tested the practical value of the views contained in this work. For with the additions and corrections required by the progress of art—a progress you must not overrate—the views here offered you

are mainly those I had so often the pleasure of presenting orally to you. All inquiries I have made tend to assure me that they have very generally obtained the sanction of your larger and wider experience.

I have the honour to be, Gentlemen,
Your most obliged and sincere friend,
London, December, 1855. R. KNOX.

NOTE

ON THE

DETECTION OF STRYCHNIA.

By MARSHALL HALL, M.D., &c.

THE detection of strychnia as a poison is, at this moment, of deep public interest.

When the *chemical* test fails, there remains, I think, another—the *physiological*. Having long studied the effects of strychnia on the animal economy, (I have sent two papers on this subject to the Institute of France,*) I am persuaded that these effects on the *most excitable* of the animal species are at once the most delicate and specific tests of this poison.

I have just performed two experiments, and only two, for want of materials for more.

I requested Mr. Lloyd Bullock, of Hanover-street, to dissolve one part of the acetate of strychnia in one thousand parts of distilled water, adding a drop or two of acetic acid.

I then took a frog, and having added to one ounce of water $\frac{1}{100}$ th part of a grain of the acetate of strychnia, placed the frog in this dilute solution. No effect having been produced, $\frac{1}{100}$ th of a grain of the acetate was carefully added. This having produced no effect, in another hour $\frac{1}{100}$ th of a grain of the acetate was again added, making the $\frac{2}{100}$ ths, or about the thirty-third part of a grain. In a few minutes, the frog became violently tetanic, and though taken out and washed, died in the course of the night.

I thus detected, in the most indubitable manner, one thirty-third part of a grain of the acetate of strychnia. It appeared to me that had more time been given to the experiment, a much minuter quantity would be detectible.

I placed the second† frog in one ounce of distilled water, to which I had added the $\frac{1}{200}$ th part of a grain of the acetate of strychnia. At the end of the first, the second, and the third hours, other similar additions were made, no symptoms of strychnism having appeared. At the end of the fifth hour, the frog having been exposed to the action of $\frac{1}{50}$ th part of a grain of the acetate of strychnia, tetanus came on, and under the same circumstances of removal and washing, as in the former experiment, proved fatal in its turn.

I thus detected $\frac{1}{50}$ th part of a grain of the poisonous salt by phenomena too vivid to admit of a moment's doubt, the animal, on the slightest touch, became seized with the most rigid general spasmodic, or, rather, tetanoid rigidity. And this phenomenon, alternating with perfect relaxation, was repeated again and again.

As the nerve and muscles of the frog's leg, properly prepared, have been very aptly designated as galvanoscopic, so the whole frog, properly employed, becomes strychnoscopic.

In cases of suspected poison from strychnia, the contents of the stomach and intestines, and the contents of the heart, bloodvessels, &c., must be severally and carefully evaporated, and made to act on lively frogs just taken from the ponds or mud. I need scarcely say, that taken in winter the frog will prove more strychnoscopic than in summer, in the early morning than in the evening.

The *best* mode of performing the experiment also remains to be discovered, with all its details and precautions; an inquiry into which I propose to enter shortly. Meantime this note may not be without its utility.

Princes-street, Hanover-square, January, 1856.

POSTSCRIPT.—I have repeated my experiment: I placed one frog, fresh from the pools, in an ounce of water, containing the $\frac{1}{50}$ th part of a grain of the acetate of strychnia; a second in the same quantity of water, containing the $\frac{1}{100}$ th, a third containing $\frac{1}{100}$ th, and a fourth containing $\frac{1}{200}$ th. All became tetanic in two or three hours, except the third, which was a *female*, (the others being males,) which required a longer time.

The $\frac{1}{200}$ th part of a grain of the acetate of strychnia is

* See the *Comptes Rendus* for June, 1847, and February, 1853.

† These frogs were not fresh from the pools.

therefore detectible by means of this test conferred by physiology.

We now placed a male frog in $\frac{1}{400}$ th part of a grain of the acetate of strychnia, dissolved in six drachms of water. In three hours and a half it became violently tetanic.

The fresh frog is, therefore, at this season, strychnoscopic of $\frac{1}{400}$ th part of a grain of the acetate of strychnia, and probably to a much minuter quantity, which ulterior experiment must show.

In two other experiments, the $\frac{1}{500}$ th and the $\frac{1}{1000}$ th of a grain of the acetate of strychnine were detected.

January 7th, 1856.

ON THE

MODERN TREATMENT OF DISEASES OF THE URINARY AND GENERATIVE ORGANS IN PARIS AS COMPARED WITH THAT IN LONDON,

FROM NOTES LATELY TAKEN IN THE FRENCH HOSPITALS,

By WILLIAM ACTON, Esq., M.R.C.S.,

FORMERLY EXTERNE TO THE LOCK HOSPITALS OF PARIS.

(Continued from p. 600, vol. ii., 1855.)

ON STRICTURES, AND THEIR TREATMENT BY INTERNAL INCISION.

DURING the last few years the attention of the profession in Paris has been frequently directed to the treatment of stricture by incision from within the urethra. It is now a well-established fact in surgery, that there are forms of the complaint which resist dilatation. Cases are met with from time to time in which the stricture is formed of such an elastic substance, that on leaving off the employment of the bougie, the diameter of the canal relapses to its smallest size; hence, the necessity of dividing this peculiarly hard and india-rubber-feeling mass by longitudinal incisions. The Institute of Paris a few years ago considered the Treatise of M. Reybard on this subject to be so excellent, that it gave him the Argenteuil Prize of 10,000 francs. In that work he enunciated the principle, that longitudinal incisions were necessary to be made through the substance of the stricture, in order permanently to cure this form of complaint. Those of his confrères who admit, to a great extent, the same views as he does on the pathology of stricture, have, however, found great fault with the instruments for the incision of the thickening of the canal, and amongst our ingenious neighbours *outré mer* various instruments have been devised for the more certain and effective internal division of the narrowed canal.

From my personal experience of this method of treating stricture, I feel convinced that the time is not far distant when this operation will be employed almost exclusively in the treatment of the more intractable cases of the complaint. I have in the following columns given the details of two as serious cases as we usually meet with in practice, treated on this method, and the effects resulting from such mode of operating are so slight, compared with those which often follow the perineal section, that many surgeons will, I think, adopt it in future, now that the instruments are being improved. Of course we cannot expect that it, or any other novel plan, will be at once accepted; but as proof that it presents feasible advantages, I may state that my friend, Mr. Erichsen, since my return from Paris, on seeing the instrument, which I shall immediately describe, resolved to employ it in a case which he was about to incise by the perineal section. The results, it is true, did not answer his expectations, but, I trust, are not such as to deter him, or others, from employing internal incision in cases adapted to its employment. As the purpose, however, of these papers is to introduce modern improvements into practice, and not simply to decry the older method of operating, I shall at once proceed to the subject I have in view.

I considered myself very fortunate in seeing two new plans of incising strictures during the short time I could devote to the hospitals in Paris, and as both of them are probably new to most of my English readers, I shall detail them at some length here. In one of these instances, Ricord was the operator; the other operation was performed by M. Maisonneuve, who now treats his patients in the wards where Lisfranc formerly gave his clinique, at La Pitié, and many of my readers may recollect