The three stages succeed each other in a short space of time. Six months to a year after the onset all the symptoms have accumulated, and are more or less strongly marked. Death arrives after two or three years, on an average, through the agency of the bulbar symptoms.

Such is the rule. Of course there exists the chapter of anomalies. These are, however, exceedingly few, and do not alter any of the essential outlines of the picture I have just drawn. Thus the disease in certain cases begins in the lower limbs; in other cases it confines itself in the beginning either to one upper limb or one lower limb. Occasionally it remains limited for some time to one side of the body, in the form of hemiplegia. Lastly, in two cases the disease broke out with bulbar symptoms. But these, I repeat, are only accessory modifications; the *ensemble* of characteristic symptoms does not fail to be soon constituted.

The prognosis so far is exceedingly gloomy. There does not exist, I believe, a single case in which, the existence of all the above symptoms being combined, recovery ever took place. Is this verdict a definitive one? Only time can show.

VI. It remains, gentlemen, for me to bring together the lesions and the symptoms, and, in an investigation of pathological physiology, to seek the link which connects them all.

1. The paresia which comes on from the onset and the permanent contractions which soon follow are incontrovertibly dependent upon lateral and symmetrical sclerosis.

I will remind you that wherever you meet with lateral sclerosis, contraction is sure, sooner or later, to show itself in a more or less marked degree. Thus: (a) in sclerosis in disseminated patches; (b) in cerebral hemiplegia with consecutive descending sclerosis; (c) in transverse myelitis through compression, or spontaneous, when lateral descending degeneration is the result; (d) lastly, in primary sclerosis of the lateral fasciculi.

2. Paresia and contraction precede atrophy. This fact is clinically established. We must needs, therefore, admit that lateral sclerosis, upon which they depend, takes place before the lesions of the anterior grey substance to which amyotrophy incontrovertibly attaches. Through what mechanism does the lesion of the grey substance join that of the white fascicles? Is it simply a case of propagation by extension, going on gradually? It is much more likely that the propagation is effected through the agency of the nervous filaments, which normally establish, as you know, a communication between the lateral fascicles and the anterior horns.

3. The system of the lateral fascicles has a tendency to be affected in its whole extent, and that very rapidly. But the lesion does not invade its totality all at once. Thus, as far as we can judge from clinical observations, it first involves the department which is in physiological connexion with the movements of the upper limbs. At a later period it reaches the department connected with the lower ones. Lastly, the group of cerebro-bulbar fascicles is invaded in turn.

It is remarkable that the alterations enumerated in the first and third sections very quickly reach the corresponding portions of the grey substance. Thus, the muscles of the tongue, and those of the upper limbs especially, begin to waste very shortly after the appearance of the paretic symptoms. It is not so in respect to the system connected with the lower limbs; as in these last, the paresia and contraction persist for a long time before amyotrophy accompanies them. These are particularities which we can only point out, without endeavouring for the present to venture upon any plausible explanation.

[Note.—The patient referred to in Lecture 1 (see THE LANCET, p. 73) as being then under observation at La Charité has since died. Bulbar symptoms carried him off. The post-mortem was performed by M. Voisin, house-surgeon in the wards of M. Woillez. Examination of the spinal cord, made by M. Gombault, curator of the Faculty, lecturer on morbid anatomy, showed the existence of lateral symmetrical sclerosis, with atrophy of the motor nervous cells in the anterior horns of the cervical region of the cord and in the first nuclei of the bulbar nerves. The anatomical preparations relating to this case were shown to the pupils during a lecture on morbid anatomy at the Faculty of Medicine.]

CALCULUS IMPACTED IN A VESICAL SAC; OPERATION; RECOVERY.

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CASES in which a vesical calculus is impacted in a sac situated in or extending through the walls of the bladder are so rare that I desire to place on record the following example which has recently occurred in my practice.

I saw Mrs. —, a lady aged fifty-two years, for the first time in June last, with symptoms which made it necessary to sound her. I did so, and found easily and distinctly enough a vesical calculus. I proposed therefore to remove it by any method which should appear to me to be the most appropriate, when, subsequently, under the influence of chloroform, I should ascertain more precisely its size and nature.

Accordingly, on July 6th, the patient having been rendered insensible by Mr. Clover, I introduced a lithotrite, and at once felt the stone on the left side of the bladder (patient's left), but, on attempting to seize it, failed readily to do so. Examining it more deliberately with the lithotrite, I soon learned that it was fixed in some unusual manner. I then withdrew the instrument and slowly carried my index finger through the urethra—often a better and safer mode of dilating the female urethra than any metallic dilator offers,—and found the calculus about one-third exposed in the bladder, and two-thirds contained in a sac and lying outside the cavity of the bladder. A finger in the vagina traced the outline and indicated its size. These conditions were verified in the same way by Mr. Foster and Mr. Clover, the only persons present. Reintroducing my finger, I insinuated my nail within the margin of the sac, and in about two minutes, by carefully working the finger round the stone, succeeded in turning it out of its bed entire into the cavity of the bladder, whence it was readily removed by the forceps after a slight incision in the left side of the urethra.

The annexed outline represents the stone of its exact size and form, the deep indentation corresponding with the neck of the sac, the larger portion of the stone being that which was contained within it, while the smaller was felt bare but immovable in the cavity of the bladder.

I have before operated on two cases of impacted vesical calculus in the male, and have seen two or three cases with others; but this is the first I have met with in the female, in whom they must be extremely rare, since the condition of the bladder which leads to the formation of vesical sacs—namely, obstruction at the neck, leading to protrusion and dilatation of the mucous membrane between the interlacing bands of muscular fibres—can very rarely exist; while this condition is, on the contrary, common in the male.

A rather free oozing of blood persisted during nearly a week, and more pain than usual in the act of micturition. The former has disappeared some days (July 25th); the latter diminishes gradually. The patient retains urine three or four hours, and has had no incontinence whatever.

Wimpole-street.

THE mortality in London last week was at the rate of 25 per 1000 annually. The deaths, 1640 in number, included 52 from scarlet fever, 31 from measles, 2 from small-pox, 4 from diphtheria, 20 from whooping-cough, 26 from different forms of fever, and 389 from diarrhoea. The heavy fatality from the latter disease occurred mainly among the infantile population, no less than 334 of the deaths being of infants under one year of age.