feet, all placed as widely apart as possible (2). Next the hands are moved alternately along the ground backwards, so as to bring a larger portion of the weight of the trunk over the legs. Then one hand is placed upon the knee (3), and a push with this and with the other hand on the ground is sufficient to enable the extensors of the hip to bring the trunk into the upright posture.

The shortening and permanent contraction of certain muscles leads to another group of symptoms—distortions due to permanent alteration in the position of joints. Some of these are produced, as are distortions in other forms of muscular weakness, by the shortening of the less affected opponents of other, more affected, muscles. Thus the knee-joints become fixed by the contraction of the flexors, and the elbow by the contraction of the biceps when the triceps has lost all power. These contractions only occur late, and are usually facilitated by the habitual flexion of the knee and elbow joints in the sitting posture. But the deformity at the ankle-joint, which results from contraction of the calf-muscles, commences at a much earlier period, before there is any disproportionate weakness in the opponents of these muscles and without any assistance from posture. It coincides, commonly, with the diminution in bulk of the muscle, and may be the result of the shrinking occurring in the length as well as in breadth,—a primary contraction. As a consequence of it, the patient cannot get the heels well upon the ground, and the foot cannot be flexed passively beyond a right angle. The gradual increase of the contraction results in a condition of "talipes equinus," and the patient walks upon the toes in a very characteristic manner. In consequence of the muscular weakness which coincides, the patient is able to walk but little, and the loss of the extension involved in the act of walking permits a rapid increase in the unopposed contraction. The feet, as Fig. 3 (p. 37) shows, soon assume a posture of extreme extension, the dorsum being in a line with the front of the leg, or the two may even form a convex curve. The spinal deformity, as I told you, is solely the result of muscular weakness.

In some cases a marked mottling of the skin of the legs has been observed, an exaggeration of that often seen in healthy children. Attention has been called by Dr. Ord to the temperature of the calves, which has been found to be higher than that of the thighs. But in other cases the change is in the opposite direction. In several cases we have tested this, and failed to find any uniform difference.

Other nervous functions are usually unimpaired. Sensibility is, in all typical cases, unchanged. Occasionally pains are felt on use of the muscles most diseased. Reflex functions are usually unimpaired, with the exception that the patellar-tendon reflex I have found absent in several cases in which the atrophy of the extensors of the knee was considerable. Earlier in the disease it is present.

In all the cases, except one, which I have mentioned to you to-day, the cerebral functions were unimpaired, and in several the intellect was remarkably acute. In most recorded cases the mind has been unaffected. In some, however, there has been mental dulness, and even actual idiocy. Several of such cases have been published by Dr. Langdon Down. It appears, therefore, that mental defect is not part of the disease, but that the muscular affection is rather more common among children who have mental defect than it is among others. In a few cases on record there have been epileptic fits, probably, like the mental defect, the result of an associated, not of a related, cerebral disease.

In two or three cases symptoms of spinal disease, spontaneous pain, formication, and paraplegic weakness have been described. These cases occurred in adults, and differed in many important particulars from the common form of the disease, and they ought, for reasons which I shall tell you presently, not to be classed with it. The premonitory stage of the disease, which one writer⁷ has described from these cases, has no existence in the ordinary form.

The course of the disease varies much in different cases. The first symptoms commonly occur in early childhood, the power of standing is lost at ten or twelve years, and death occurs between fourteen and eighteen. In the cases in which the first manifestation of the disease is delayed until five, six, or eight years, the condition attained at puberty is usually less advanced, and life is prolonged until nineteen or twenty years; in some cases even longer. The rule of late develop-

ment and slight degree is seen conspicuously in some of the cases in girls, as in the last case narrated, and in several others which are on record; as one in which the first symptoms occurred at five, and at fifteen the patient was still alive;⁸ and another in which the first symptoms occurred at nine and the patient was seen at thirty-one.⁹ In boys exceptions to this rule are not unfrequently met with, in which the disease, appearing late, has made very rapid progress. In a case described by Dr. William Smith,¹⁰ for instance, the first symptoms were not noticed until five years of age, and at eight the patient had already lost the power of standing. On the other hand, in a few cases in which the first symptoms coincided with the first attempts to walk, the disease has run a slow course, as in the case of William S.—I described to you, who is now nineteen and a half years of age. Instances of this are also seen in girls, as in a case in which the first symptoms were noted at a year and a half, and the patient when seen was twenty-seven years of age.

Of twenty-four cases in which I have found the age at death mentioned, in nineteen the patient died between ten and twenty—viz., in one case at eleven, in four at thirteen, in two at fourteen, in two at fifteen, in five at sixteen, in two at seventeen, in three at nineteen. In two cases the patient died at six, in one probably, in the other certainly, of an accidental malady. In one case death occurred at thirty, and in two at a little over forty years. (The latter three occurred in families in which other cases occurred and ended in early life.) This list includes only three females, one of whom died (of scarlet fever) at six, one at fifteen, and the other at forty-two.

The disease is not itself fatal; death is always the result of intercurrent maladies, the occurrence or fatality of which is, however, in most cases the result of the muscular disease. The weakness and wasting of the thoracic muscles, for instance, gradually lessen the respiratory power. The patient is thereby weakened, and is rendered an easy prey for the maladies which lie in wait for the infirm. The most common cause of death, indeed, is the direct interference with the action of the lungs. As the patient becomes weaker, bronchial râles are heard through the chest, dyspnoea comes on, and is rather increased than lessened by the patient's feeble attempts to cough. Pyrexia may be developed, and the patient dies with the signs of a chronic broncho-pneumonia, which has in many cases been found after death. In some cases a more acute lung affection occurs, a trifling cold developing, under the pulmonary conditions, into a grave disease. In a few recorded cases some other intercurrent malady has been fatal, especially measles, no doubt from the bronchitis which, as you know, often accompanies that disease. Of nineteen cases in which the cause of death was mentioned, lung disease was the cause in thirteen cases, measles in two, an acute intestinal affection in two, laryngeal croup in one, and scarlet fever in one case.

(To be concluded.)

IMPACTION OF A GOLD PLATE AND FALSE TEETH IN THE ŒSOPHAGUS FOR UPWARDS OF TWO YEARS.

By NICHOLL EVANS, M.D.

AT 11 P.M. on April 26th, 1877, I received an urgent summons to go and see Miss A—, who was said to have swallowed some artificial teeth.

On my arrival, I found an anæmic, exceedingly thin girl, aged twenty-one, an invalid for many years past, who informed me in a whisper (amongst other complaints she suffered from hysterical aphonia) that in the act of taking a pill, about fifteen minutes before my arrival, she threw her head back, and an artificial gold plate, with four incisor teeth attached, fell from the upper jaw into her mouth, and was swallowed with the pill. The plate had not long been made by the dentist, and fitted rather loosely. She complained of deep-seated pain behind the sternum, about two inches from its upper end, and in the back half-way between the

⁸ Cavagnis, Ann. Univers. d. Med., 1876.

⁹ Peirson, Zeitschrift für Prakt. Med., 1876, No. 51.

¹⁰ Australian Med. Journal, 1871.

spine of the right scapula and the vertebræ. She had not retched or vomited. My partner, Mr. Mavor, had also been sent for, and on his arrival we passed an ordinary sponge-headed probang into the œsophagus, which met with resistance at a distance of eight inches and a half from the lower incisor teeth. Using some pressure the sponge went beyond the obstruction, and was caught firmly on trying to withdraw it, but soon returned without removing the foreign body. This was repeated at intervals three or four times, with the same result, care being taken not to use violence in the withdrawal of the probang. We then gave a strong emetic of mustard-and-water, which was swallowed without much difficulty, and was quickly rejected in a fairly full stream, but without dislodging the plate. After some further rest, we bent the end of a long stout silver probe into the shape of a hook, and fastening a piece of string on to the other end, passed the probe down the gullet beyond the obstruction, and hooked apparently one of the springs of the gold plate, as it required considerable manœuvring to detach the probe again, but no impression was made on the obstruction.

It was now 4 A.M., and as we had spent five hours in unsuccessful attempts to get the teeth up, we decided to send for Mr. T. Smith from town, who arrived at 8 A.M. After hearing our report, Mr. Smith passed an œsophageal bougie direct into the stomach, and turning round, said, "It has gone down; it is not there now." When, however, I again passed the sponge-headed probang, the obstruction was still met with at the original spot. Mr. Smith now tried to grasp the plate with a long pair of forceps, but without success. So, finding that our patient could swallow fluids, we decided, as she was becoming exhausted, to postpone further measures for forty-eight hours; and after administering an opiate we left her.

Mr. Smith returned on the 29th, and finding Miss A—fairly well, considering the strain to which she had been exposed, again endeavoured to seize the plate with a longer pair of forceps—after sounding with a probang and ascertaining that the plate was in the same place—but with no better success than before. We therefore resolved to trust to the "chapter of accidents," and fed her as well as we could with fluids and nutrient enemata, any further operation for the removal of the obstruction being for the time out of the question.

From this time the girl herself, as well as her parents, were unwilling to allow any further operative interference, as I could not guarantee its success, and it would not be unattended with risk. She continued to live, however, in much the same condition, swallowing such food as she could. The enemata were well borne for some weeks, when they had to be discontinued on account of irritability of the rectum. Mr. Smith saw her again at the end of November, seven months after the accident, but was unable to persuade her to submit to any further operation. She was now so thin that the spinal column could be felt almost without pressure immediately behind the abdominal walls.

In this state she remained until May 5th, 1879, when I was asked to call and see her, and was informed that she had brought up the teeth (two years and eight days after swallowing them). About 11 P.M., May 4th, she was attacked with retching, and when this passed off she inhaled a teaspoonful of chloroform (as she was in the habit of doing when in much pain). While drowsy from the chloroform she vomited, and, hearing a chink in the bason, she picked out the teeth from the vomit. She felt no unusual pain, and brought up no blood. Since then the pain in the œsophagus has not decreased, nor is deglutition easier, but it is not accompanied by the troublesome choking which for some months has generally followed the taking of food, especially of certain kinds.

I brought away the artificial plate, and on examining it found it almost unaltered in appearance, the gold being merely discoloured in parts, while the plate fitted exactly the plaster cast of her mouth, which the dentist had been kind enough to send me soon after the accident occurred in 1877.

The poor girl's previous history is a somewhat unusual one, and perhaps the fact of her living so long may be accounted for by her having had for years before what one may call an education in starvation. Having been always a weakly girl, in 1869 she had a fall on the ice when skating, strained her left ankle, was laid up for thirteen weeks by that (and, query, the treatment of a bone-setter?), and has never walked properly since. During 1871 contraction of the leg set in. In June she caught scarlatina, and after it lost

her voice. She was able to get about on crutches, but, the contraction of the leg continuing in spite of stretching, in 1876 Mr. Adams divided the flexor tendons behind the knee, but without any benefit following. The left heel now nearly touches the buttock, and the right leg has become similarly affected during the last eighteen months, though to a less extent.

She was always an eccentric feeder, no persuasions or threats on the part of her friends having any effect, and this eccentricity has increased of late; wholesome food, or what is considered so, generally making her vomit, while she could swallow and retain, even after the accident, such things as watercress, jam, onions boiled and chopped fine, cream cheese, Osborne biscuits, minced ham or tongue, crabs, &c., though, of course, in extremely small quantities. The stomach appears to be very contracted, and she suffers frequently from colicky pains and constipation, for which she takes castor oil (with ease) once or twice a week.

Menstruation commenced ten years ago at the age of thirteen, and occurred regularly for two years, ceasing then until 1877, since which time it has appeared occasionally, being more frequent during the last six months.

On May 22nd (seventeen days after the rejection of the teeth) I passed a sponge probang into the œsophagus. On account of the pain produced the examination was a hurried one. So far as I could ascertain, there was evidence of considerable pouching above, and contraction at the point where the teeth were lodged.

On June 25th there was no improvement in the general condition, deglutition being more difficult, and accompanied with more choking.

Note by THOMAS SMITH, F.R.C.S.

I venture to add to Dr. Evans's account a very brief statement. The foreign body in this case consisted of four incisor teeth fixed to a gold palate-plate, and having on either side two very sharp hooks. It measured rather more than an inch and a quarter in its widest diameter. It must have very seriously obstructed the passage of food, and I quite agree with Dr. Evans that life would not have been prolonged had not the patient been accustomed to live habitually in a state of semi-starvation. When I last visited her, seven months from the swallowing of the teeth, I had never before seen any living person reduced to such a state of emaciation.

I may mention that at the time of the last attempt to extract the teeth we had little doubt of being able to remove them at a future time, by waiting until presumably the œsophagus had become pouching above the seat of obstruction, but we were not allowed to make any further trial. There can, however, be no doubt from the sequel of the case that this pouching did take place, and that at last the foreign body came to lie quite loose in the œsophagus, for the teeth were finally ejected without effort, and by an act of vomiting which, in one so debilitated as our patient, could have possessed but little expulsive force.

THE PAST WINTER IN DAVOS.

By DR. CLIFFORD ALLBUTT.

IN accordance with my promise, I venture to state the experience of the past winter in Davos, as a guide to the profession who have to advise patients in search of health. In THE LANCET of June 8th, 1878, I gave the experience of the previous winter, and I shall be able now to refer to the later state of some patients of whom I then spoke. The influx of English patients to Davos since the publication of my first papers in THE LANCET of Oct. 20th and 27th, 1877, has been so great, and the number of letters I have received on the subject has been likewise so large, that I do not make excuse for occupying these valuable columns with farther information, as accurate as I can make it. In the winters before I wrote upon Davos a mere handful of English found their way thither; in the next winter 50 resided there, and during the past winter more than 250 have resided. A heavy responsibility therefore rests upon me to justify my recommendation of this health-resort, and to point out as clearly as possible its advantages and its drawbacks. Most