ing. Her weakness gradually increased so that she could only walk with difficulty, and she used to fall down in the street without any warning, and when down could not get up until assisted. The symptoms vary a little in degree every few days, but on the whole have gradually got worse and have never at any time completely disappeared. About eighteen months ago, while singing, her tongue became paralysed and she could not articulate distinctly, and about twelve months ago she had difficulty in swallowing, and liquids came down her nose. Five months ago suffocative attacks supervened. There was no history of diphtheria. On examining the eyes it was found that there was slight ptosis on both sides, and that the movements of the eyeballs were sluggish, and restricted in all directions, especially upwards. The right eye could not be turned upwards at all, and forced movement in any direction was attended with nystagmus; diplopia was present at times. The field of vision when the lids were raised was normal. The pupils were equal, of normal size, and responded to light and accommodation perfectly. The fundus oculi was normal on each side. She could not close her eyes tightly, and fibrillary tremor of the orbicularis muscle occurred when she tried to do so. She complained of food collecting between the gums and teeth, and that her tongue was weak. Her speech was a little indistinct, more especially after talking for a few moments. She complained also of difficulty in swallowing, but no paralysis of the soft palate could be discovered, and the palatal reflex was present. Mastication was impaired from loss of muscular power. The arms could not be lifted from the shoulders, the deltoids were large, and all the other muscles appeared normally developed, there were no sensory changes, no exaggeration of reflexes, and no electrical changes. The spinal muscles were very weak, the patient being unable to sit up without assistance, and when supported on her feet marked lordosis was present. She raised herself from the sitting position by placing her hands on the chair, and did so with great difficulty. When lying down she could not get up at all without assistance. Her legs were also very weak, for she could not lift them from the bed. Her gait was slightly waddling, and she would have fallen without support. The knee-jerk was a little increased, but there was no ankle clonus; the plantar reflexes were usually absent. There were no sensory changes, but the hands and feet were cold and blue. The patient was admitted into the Queen's Hospital for further observation. It was found that she could not lie down in bed, dreading an attack of suffocation, and she had to be propped up in bed constantly. An attempt to examine the throat brought on inspiratory stridor and cyanosis to such an extent that the patient seemed about to be suffocated. She stated that she had had several of these attacks, and that she was afraid she should die in one of them. She asked for her meat to be minced, saying that she had no power to masticate it, though her teeth were good. The patient has been under observation three months and remains in the same condition. She has had no febrile attacks, no convulsions, and no hysterical symptoms.

CASE II is that of a young lady brought to me by Dr. Smith, of Redditch. She is 18 years of age and very tall. Her illness is attributed to exhaustion. She has been ailing three years, her illness commencing gradually and slowly increasing since. She is extremely weak, being unable to walk more than a hundred yards without becoming exhausted. The arms are also very weak and the grasp feeble. She cannot hold her arms out or place them on her head. There is slight ptosis, squinting, and diplopia at times. The movements of the eyeballs are attended with nystagmus, and are much restricted in all directions. The left eye cannot be moved outwards and the right cannot be moved downwards. The knee reflexes are a little increased but there is no ankle clonus. She complains of difficulty in swallowing and in mastication. After mastication the jaw drops, and she has to support it until power is recovered. She complains also of difficulty in articulation. She is slightly choreic. She has had no suffocative attacks and no fits, nor has there been any hysterical symptom.

This case almost exactly resembles Case I now in the Queen's Hospital. Both these cases have been supposed to be cases of hysteria, but the gradual onset and slow progress without any sudden changes, the implication of muscles supplied by the third motor portion of fifth, sixth, facial, hypoglossal and spinal accessory nerves, the nuclei of which form a continuous series in the iter and fourth ventricle, tends to prove that the disease is not hysteria. At the same time the disease is probably functional, and of the nature of an exhaustion paralysis, and there is no reason why each patient should not recover.

GENERAL PARALYSIS OCCURRING ABOUT THE PERIOD OF PUBERTY.¹

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GENERAL paralysis is regarded as in the main a disease of the prime of life, and though, as is well known, cases are frequently met with both before and after this epoch, the association of the disease with the period of puberty has hitherto been hardly recognised. Scattered cases of juvenile general paralysis have indeed been recorded by Clouston, Turnbull, and others; and in the *Neuroses of Development*, recently published by Clouston, two fresh cases are described, in which the connection of the disease with puberty is fully recognised, under the title of "Developmental General Paralysis."

¹ Abstract of a Paper read at a Meeting of the Medico-Psychological Association, March, 1893.

Two cases recently under my care in Rainhill Asylum confirm and establish this connection. Both occurred in girls, the disease in the one case commencing at the age of 12, and in the other at the age of 14, and proving fatal at 16 and 18 years of age respectively. Both children had previously been intelligent, and in both cases the disease was said to have been started by a fall, though whether this was the cause of the disease, or merely an early symptom of it, could not be ascertained. The mental symptoms in both cases were those of slowly progressive dementia without grandiose ideas, a gradual, almost imperceptible, failure of mental power having been noticed from the first; and soon following the mental failure came slowly progressive paresis of the limbs, until at length the patients were absolutely paralysed and bedridden with strongly developed contractures. Epileptiform convulsions were noted in one of the cases. The *post-mortem* appearances in each case were characteristic; there being great thickening and opacity of arachnoid with adhesion of pia mater to cortex, and in one case decortication; enormous wasting of the convolutions, and great atrophy of the cortex; whilst in one case there was an old, thick, organised, subdural membrane.

Analysis of these two cases, and of six other published cases—eight in all—shows that the average age at which the disease commenced was 14 years. There was a tendency in the disease to be more prolonged than usual, the average duration being 4½ years. Five of the cases were girls and only three boys, which seems to indicate that the great preponderance of male cases in adult general paralysis tends to disappear in these juvenile cases. The mental state showed an immense preponderance of the demented type of general paralysis, grandiose ideas being only present in one case. The signs of puberty either did not appear at all, or were arrested and tended to disappear, menstruation in the females being absent; and an arrest of bodily development was also noted in all cases. The two most prominent factors in the production of the disease appeared to be heredity and congenital syphilis, traumatism being also probably an additional cause in some cases.

TONSILLOTOMY, WITH AN ANALYSIS OF 230 CASES.

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THE text of the present communication on this simple subject is the expression of opinion by a recent writer that excision of the tonsils is a bloody and barbarous operation, followed in many instances by grave depression of health. Tonsillectomy differs from many other operations, inasmuch as it is frequently performed by general practitioners and is not restricted to the hands of a few surgeons or specialists. Its discussion ought consequently to be of interest to the mass of the readers of the *BRITISH MEDICAL JOURNAL*, more so, indeed, than many of the major operations.

To assist at arriving at impartial conclusions on these and other points, the following cases, which have passed through my hands during the last few years, have been specially noted. I have been obliged to omit many other cases on account of the difficulty in following them up and ascertaining the effects of the operation.

Age and Sex.—The following were the ages and sex of those operated on:

	M.	F.	Total.
Under 2 years	3	2	5
From 2 to 5 years	15	9	24
" 6 to 10 "	33	31	64
" 11 to 15 "	18	24	42
" 16 to 20 "	15	24	39
" 21 to 30 "	23	14	37
" 31 to 50 "	8	8	16
Over 50 years	2	1	3
	117	113	230

From this table it will be seen that the greatest number of patients were from 6 to 10 years of age; that the males were in excess of the females, unless at the period of puberty, when the proportion of the sexes was reversed, and that the

operation is rare under 2 and over 50 years. The small number operated on under 2 years of age is owing mainly to the fact that, unless the indications for the operation are very urgent, parents do not care to have infants or very young children operated on.

Indications.—The indications varied somewhat according to the age of the patient. In children up to and about 10 years of age chronic enlargement was most usually present, whilst in those about the period of puberty and onwards acute recurring swelling of moderately enlarged tonsils was generally met with. The chronic enlargement of infancy and childhood was always associated with derangement of the respiration and of sleep—noisy, snoring, and choky respiration, and restless disturbed sleep, having invariably been present. The general health was always indifferent or bad (aërial starvation); the chest was poorly developed. These symptoms, associated with chronic enlargement of the tonsils, were aggravated in many instances by certain concomitants, such as purulent rhinitis, post-nasal catarrh, and adenoid growths and enlargement of the pharyngeal tonsil—conditions which necessarily required special attention, otherwise the results of tonsillotomy might have proved disappointing. In 157 cases both tonsils were removed; in the remainder (73) one only. The cases of single tonsillotomy were those in which one tonsil only was enlarged, or in which the recurring inflammations habitually commenced in one and the same tonsil. The single tonsil was, I think, more frequently the left than the right. It is a curious fact, without explanation so far, that most lesions of the tonsils, and of the larynx also, evince a greater tendency to commence on the left side than the right.

Anæsthesia.—General anæsthesia (chloroform) was induced in nine cases, with ages varying from 4 to 13 years. In two of these it was administered to allow of the second tonsil being removed, and in four it was a condition of the operation on the part of relatives. When it is remembered that 135 of the patients were under 15 years of age, it will be admitted that the number requiring general anæsthesia was small. Local applications of 10 per cent. solutions of cocaine were made in most of the other children.

Hæmorrhage.—Profuse or troublesome bleeding never followed the operation. In the case of a man, aged 30 years, from whom a small irritable tonsil had been removed, some oozing of blood, which occurred on the second day, was readily stopped by the local application of a solution of the permanganate of iron. I am aware that instances of persistent hæmorrhage after tonsillotomy have been recorded in the medical press, and a friend of mine has informed me that he once witnessed a case of rapidly fatal hæmorrhage in the practice of a brother practitioner. I believe, however, that hæmorrhage will not occur if care be taken to leave a cleanly-cut surface, and if the faucial pillar or soft palate be not notched in the operation. It seems also, as I have shown in a previous communication, that drinking warm fluids soon after the operation favours bleeding. Small children occasionally vomit blood which has been swallowed immediately after the operation. This vomiting may be deferred for hours, and sometimes causes alarm to the relatives, unless they have been forewarned of the possibility of its occurrence.

Results.—In children the local and general results were without exception most beneficial, and the younger the child and the larger the tonsils, so much the more satisfactory was the after-condition of the patient. In two cases only (males aged 7 and 10 years) the tonsils re-enlarged, the one seven months and the other two years after the operation, and excision had again to be performed. In three adults the tonsillar stumps became inflamed in periods varying from three to fifteen months, and in one instance an acute abscess formed two years after the tonsils had been removed. It is right to remind the reader that in children these results in several instances were not attained by removal of the tonsils alone, but, in addition, by curetting or scraping the nasopharynx and posterior nares, and galvano-cauterising the anterior nares in cases in which obstruction of these regions existed. Such were almost exclusively under 10 years of age, with the marked respiratory and other troubles already referred to, and in no single instance was there failure to give marked relief.

The operation did not appear to be quite so successful in

regard to the removal of the deafness which occasionally accompanies tonsillar enlargement, though in some instances this was remedied, especially when the operation was supplemented by treatment of the naso-pharynx.

It does not fall within the scope of the present paper to discuss the serious disadvantages from which children with enlarged tonsils suffer in regard to their proclivity to diphtheria and allied complaints, and their marked tendency to develop grave types of these diseases. I am satisfied that the operation is neither bloody nor barbarous, and that its results will stand comparison with most of the other surgical procedures of the present day.

A CASE OF CÆSAREAN SECTION FOR RACHITIC DEFORMITY: RECOVERY OF MOTHER AND CHILD.

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THE following case is merely a further illustration of the principles which must surely now be generally recognised as essential for success in this operation. If we study not only the records of those who have had the largest experience and greatest success in this operation, but also the failures of some who ought to have succeeded by reason of their special knowledge of the subject, as well as the advantageous circumstances in which they are placed for performing the operation, and especially the successes of some who have no special knowledge, and have operated under circumstances such that they were unable to obtain any skilled assistance at the operation, or for the after-treatment of the case, and whose appliances were of the simplest, we are compelled to form the opinion that the requisites for success are of the simplest kind, but that they are essential, and that to disregard them is to fail:

1. No case is favourable which is septic at the time the operation is to be performed. In such cases the child can usually be disregarded, it being already dead, and we have only to consider the safety of the mother, and if we can avoid Cæsaean section should do so.

2. Absolute cleanliness, to be obtained by whatever means, we must rely upon the simplest that are effectual.

3. We must use a suture for the uterus that is absolutely reliable, that will not come undone in spite of the rhythmical relaxations and contractions of the uterine wall. Some use silk, some silver wire; each has slight advantages in certain details; they are both equally safe in the essential matter if properly secured, and they only rarely give rise to subsequent trouble, a subordinate matter, though one we should be glad to be sure of avoiding—subordinate, indeed, in the opinion of any who have seen the uterus gaping from one end to the other in the *post-mortem* room.

Let the suture be inserted through the whole thickness of the muscular wall, avoiding the decidua, and at a sufficient distance from the edge of the wound to prevent it cutting out.

It may well be asked why there are still failures when every care is taken to carry out these generally recognised principles? The answer seems to me to be clear: It is from the excessive time spent over the operation, and in the elaboration of details which are not essential; the shock and prolonged exposure they entail certainly contribute to the fatal result. Why spend an hour over a complicated method of suturing the uterus, when a far shorter time is sufficient to insert a single row, which is equally, beyond doubt, efficient?

L. H., aged 26, was sent to St. Bartholomew's Hospital by Dr. Hewkley on November 3rd, 1892, at 1.30 A.M., labour having begun the previous afternoon at 3.30 P.M. This was her first pregnancy, she having been married nearly three years; the last menstrual flow, which had always been regular, ceased about the end of January, 1892. One paternal uncle and one sister were deformed from rickets.

Condition on Admission.—The patient, who appeared to be in good health in other respects, was obviously rachitic, with marked lordosis of the pelvis, which presented the following measurements:—Crests, 9½ inches; spines, 9½ inches; conj. ext., 5½ inches; conj. diag., 3 inches. From these data the true conjugate was estimated to be 2½ inches; the antero-posterior diameter of the cavity was found to be 2½ inches. The sacrum was