

control should be maintained until a later age than is at present considered necessary by legislators. To give only two of these: it must be insisted that the deaf child is entitled, and justly, to as much advanced education and to as advanced teachers as possible. We have not yet arrived at the time when every precaution is taken to diminish, by negative and positive eugenics, the number of the congenitally deaf, nor have we reached perfection in the prevention of acquired deafness in children. When so ideal a state of affairs has been accomplished we shall not have so many deaf to educate, but until then we have this great problem of the deaf child to face, and it must be faced squarely and the very best done for them that can be devised—for their sake, for the sake of the State, and for the sake of humanity.

Secondly, under the shorter period, the scholar is removed from the teacher's influence just at the time when that influence is most felt, most required, and most likely to make a lasting impression. The first two years of instruction, from three to five years, should be passed in a preparatory class, where the child's capacity, his mentality, and his chance as an oral success or failure could be ascertained by experienced teachers. Teachers of the highest experience and capacity are most needed for this part of his training. Much precious time could be saved by this arrangement, and each child could be drafted at the age of five years into an elementary deaf school in a better state of fitness for his curriculum.

It will be remembered that in the first of these articles I postulated certain conditions that I considered to be needful for the ultimate improvement of deaf education. The first of these is that discussed in the present paper, the third and fourth may be reasonably noticed now. The need of greater care of the deaf child whilst at school, by care committees and similar means, whereby it can be assured that his attendance at school is regular, his meals are adequate, that he is not neglected or exploited by his parents, and that he is removed from the influence of bad companions and bad home surroundings, is a consideration which hardly requires discussion. Parts of it have already been touched upon, and all I need add is that legislation is urgently needed to ensure greater control over the deaf child, and more people are wanted to take an interest in him. There seems a curious lack of sympathy with the deaf, especially when it is compared with the quantity lavished upon that much happier class of the physically defective—the blind. It seems so difficult to make people understand the position of the deaf child, that he is neither imbecile nor mentally deficient, but simply a normal child deprived of that sense which might be, of all his senses, of the greatest educational value to him. It does not take long to discover from contact with deaf children what a charming and loveable class they are, and I would appeal to the charitable to take up their cause with more vigour than has yet been the case.

The fourth need postulated was the encouragement of the deaf child to mix with hearing people. This would be greatly helped by an extension of the later educational course. The last two or three years, from 15 or 16 to 18, would be occupied in an advanced school where special training would be given in some trade or occupation and where moral training suitable to the more advanced age of the pupil would be made a feature. Possibly it might even be better if the advanced school life should be, as at present, from 14 to 16, scholars from 16 to 18 passing to a college for the deaf, where they could obtain a course of training which should be a modification of the ordinary university life.¹³ This could, however, be settled when the extension of the educational age had been secured by legislation. This system, or a modification of this system, is already in vogue in some parts of the United States, where it appears to have been eminently successful.

I feel sure that by some such arrangement as is here advocated the very deaf child would leave his educational courses better equipped intellectually, usefully, and morally

¹³ If education commenced at three, instead of at seven, a further modification of what is here advocated would be possible, for, as will be seen in the third article, the effect upon speech and language teaching would be such that the scholars would be much more advanced than they are at the present time. There are, moreover, reasons for believing that a university course in an ordinary hearing college would be more acceptable and more advantageous than the foundation of a deaf university. The Gallaudet University in the United States is a great success, but the alternative would be better calculated to encourage the mixing of the deaf and the hearing.

than can possibly be the case under present methods. The aim of all education is to fit the child, in the best possible manner, for self-reliant, self-supporting citizenship, and if this is so for the scholar who is fully equipped as regards his senses, it holds good equally for the normal deaf child. I believe that the whole secret of deaf education is to give to the young deaf child that physiological training that his defect has denied to him and whereby he is, at seven years, like a normal child of two in mentality, and to keep him longer at school in order to give him as advanced an education as is possible to equip him for his career in the world in order to remove, or at least to obviate, the handicap which nature has imposed upon him.

In conclusion, I wish to touch upon a matter which is of a very delicate nature, alluded to in the concluding words of the fourth postulate in the first article, "a more careful supervision of religious missions to the deaf." Nothing is farther from my mind than to make any charge of neglect, or to write anything that can reflect in the least degree upon or wound the feelings of any person or persons connected with any particular mission, all of which are conducted by high-minded, disinterested, and, in many cases, self-sacrificing men, actuated solely by the unselfish wish of benefiting the deaf community and ameliorating the conditions under which they live. But these worthy people are too apt to lose sight of other and important considerations in their ardour for their religion. The question is a delicate one and requires careful and tactful handling. The free signing which goes on amongst the deaf-mutes who attend these missions cannot be controlled and those in authority are powerless to prevent it. If any teachers of the deaf read these articles they will fully understand to what I allude, and may, possibly, be prevailed upon to give their own experiences of this matter. The remedy lies, of course, in the better education of the deaf, and the universal encouragement of the oral system among the deaf and the discouragement by missionaries of its abandonment after leaving school. Until then, however, I would earnestly advocate that it should be the future care of these missions to regulate their meetings with a view to greater restraint. They should hold different sittings for different sexes (especially when lantern lectures are given), and, an item of equal importance, they should hold different meetings for the old and for the young.

(To be concluded.)

A CASE OF SUPRARENAL APOPLEXY.

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FOR the clinical details of the following case I am indebted to the house physician, Dr. Norman W. Steinberg.

A male child, aged 8 months, was admitted into the Royal United Hospital under the care of Dr. E. J. Cave on Oct. 30th, 1910, with the history, obtained from the parents, that throughout the morning the child had been very drowsy and had "looked strange," but that he had not seemed to be in pain, had taken nourishment readily, and that the bowels had acted as usual. About 3 o'clock in the afternoon he vomited, and as the baby appeared to be getting worse he was brought to the hospital. Previously the child had always seemed perfectly healthy. He had been breast-fed until three weeks before admission, when a mixture of cow's milk and water was substituted. On account of the parents' conscientious objection the child had never been vaccinated. The mother had had one other child, who died at the age of two years from pneumonia after an illness lasting ten days, and two miscarriages.

On admission the infant was obviously very ill: complexion grey, eyes dull, breathing rapid, shallow, and noiseless; temperature 100.4° F., pulse 140, and respirations 72. Râles could be heard all over the chest, especially at the bases behind. The abdomen was soft and not tender. There were no signs of meningitis, and nothing abnormal was to be seen in the mouth or fauces. Two hours after admission an extensive eruption of purple spots and blotches appeared over the whole trunk, upper arms, and thighs. The temperature had fallen to 99.4°. The child rapidly grew worse,

the face becoming cyanosed, and death occurred at 7.30 P.M., four hours after admission. There were no convulsions throughout.

Neoropsy.—The post-mortem examination was made 22 hours later. The body was that of a well-formed, well-nourished infant. It bore no vaccination marks. On the trunk, front and back, and on the limbs down to the elbows and knees, was visible the blotchy purpuric eruption mentioned. The larger patches were dull red rather than purple, and appeared to be somewhat raised. A few small spots were to be observed on the neck and on the face in front of the ears.

The lungs were congested and cedematous. The heart appeared healthy except that on the auricular surface of the mitral and tricuspid valves, close to the free margin, were a few very tiny beady elevations. There were no subpleural or subepicardial petechiæ. The liver was pale; the spleen and kidneys normal. The intestines were pale and collapsed; the mesenteric glands not enlarged. The suprarenal capsules were striking objects, even before their removal from the body; of little more than normal size for a child of this age, they were both of a deep purple colour and evidently the seat of hæmorrhage. The extravasation of blood had taken place into both the cortical and medullary portions, but no bleeding had occurred into the adjacent tissues. Microscopically the structure of the medulla was seen to be completely destroyed and replaced by effused blood. The arrangement of the columns of cells in the cortex could be made out, but the cells themselves had largely disappeared, their nuclei alone remaining, whilst everywhere were to be seen large numbers of red blood corpuscles. All the other organs appeared natural. The spinal cord was not examined.

Cultures taken from the adrenals, from the spleen, and from the cerebro-spinal fluid all proved sterile. No micro-organisms could be detected in films made from the cerebro-spinal fluid and from the interior of the suprarenal capsules. Sections of the suprarenal capsules were stained by Levaditi's method for spirochætæ with a negative result.

Remarks.—Whilst it is not very uncommon to meet with hæmorrhage into the adrenals of stillborn children or of infants dying shortly after birth, and whilst bleeding into these bodies may, rarely, take place in conditions of great venous congestion, it is, with these exceptions, an occurrence which, to judge from the number recorded, is one of considerable rarity.

The case related above appears to form one of a distinct group, examples of which have been described by Voelcker,¹ Still,² Garrod and Drysdale,³ Batten,⁴ Andrewes,⁵ Talbot,⁶ Blaker and Bailey,⁷ Graham Little,⁸ Langmead,⁹ and Dudgeon.¹⁰ Omitting the case of Still, in which miliary tuberculosis also was found at the necropsy, and that of Batten, in which hæmorrhage occurred into one suprarenal capsule only in a boy, aged 2½ years, there remain, including that just described, 15 cases, all infants between the ages of 2 and 15 months, and all of whom died after an illness lasting in the majority less than 24, and in none more than about 48 hours. In all but three a hæmorrhagic rash of greater or less extent was present. Vomiting occurred in 6, diarrhoea in 1, convulsions in 5, and symptoms suggestive of abdominal pain in 3. In several cases signs of bronchitis were present. The temperature—in most between 100° and 103°—in Voelcker's case was 105°, and in one of Graham Little's reached 108° before death. Apart from the lesions of the adrenals and the hæmorrhagic rash, the most constant post-mortem findings have been intense engorgement of the lungs. Blaker and Bailey lay emphasis on hyperæmic swelling of Peyer's patches and of the mesenteric glands, resembling that found in the early stages of enteric fever. Cultures from various organs have in most cases proved negative, but in one of Talbot's a streptococcus was obtained by Drysdale from the suprarenal capsule after death.

The suggestion was made, both by Voelcker and by Andrewes, that theirs were cases of rapidly fatal hæmorrhagic small-pox, and the fact that of these 15 cases only

one had been vaccinated, whilst 11 were unvaccinated (the history of the other three in this respect being imperfect), seems to suggest either that there is some relationship between this disease and variola, or that the extent to which vaccination is performed in the country which gave it origin is lamentably insufficient. Since none of these cases seem to have occurred during, or to have been followed by, an epidemic of small-pox, the latter appears the more likely.

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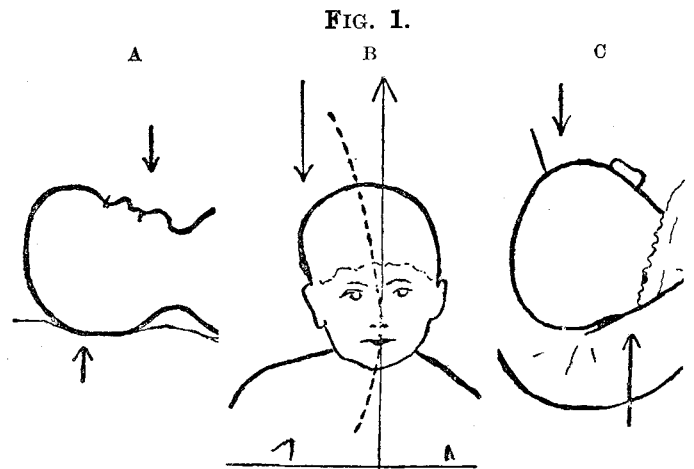
CRANIAL ASYMMETRY DUE TO POSTURAL CAUSES.

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FEW, if any, of us attain to the perfection of bi-lateral symmetry; consequently, in common with the rest of the frame, the two halves of the calvarium are rarely exactly alike—a fact which is of importance only on the occasion of a visit to one's hatter.

The causes of *abnormal* distortion may have been forces acting upon the bones from within or from without, and the earlier in life that they have been brought to bear the greater is their effect, owing to the yielding nature of the young bones. In infancy, too, the attention is drawn most forcibly to cranial asymmetries, for any irregularity in the roof is naturally more obvious when the thatch is thin. Many interesting abnormalities have pre-natal origin, or are due to traumatism in parturition; others arise from cranial or intracranial disease. In this short note, however, I am only dealing with posture as a cause of deformity, and more particularly with one characteristic variety.

The effect of posture is, of course, the application of the law of gravitation. Now the position of the normal baby is so frequently varied that gravitation, if it have *any* effect in moulding the cranium, acts symmetrically in the production of a normal skull. When the baby, or the circumstances surrounding it, are not normal, the action of gravity produces variations. A rachitic child, for instance, being soft of bone and inactive muscularly, lies much on its back, and the calvarium is consequently pushed forwards—or rather “upwards,” as the child lies. This is one of the factors concerned in the production of the well-known frontal prominence of the rickety head. To be strictly accurate, it is the face and base of the skull which, acted on by gravity, are pulled downwards (backwards) away from the calvarium, which, supported by the occiput, lies on the pillow and can descend no further (Fig. 1 A).



Diagrams to illustrate the action of gravity causing cranial asymmetry in A, rickets, B, torticollis, C, an infant nursed at one breast only.

In cases of so-called congenital torticollis, which are probably due to injuries of the sterno-mastoid and adjacent muscles at birth, a marked facial and cranial asymmetry is seen. The face is said not to develop fully on account of pressure on the carotid artery. This may be so; but if a sheet of paper be held in front of the face dividing it vertically into two halves, it will be seen that not only is the affected side smaller, but there is also a projection of the skull-cap and chin towards the same side; a central line drawn down the face will thus be curved with the convexity

¹ Pathological Reports of the Middlesex Hospital, 1894-5.

² Transactions of the Pathological Society, 1898.

³ Ibid. ⁴ Ibid. ⁵ Ibid.

⁶ St. Bartholomew's Hospital Reports, 1900.

⁷ Brit. Med. Jour., 1901.

⁸ British Journal of Dermatology, 1901.

⁹ THE LANCET, May 23rd, 1904, p. 1496.

¹⁰ American Journal of the Medical Sciences, 1904.