SURGICAL PROCEDURES IN GENERAL PRACTICE

This is one of a series of articles contributed by invitation

MINOR SURGERY OF THE NEWBORN

BY

DENIS BROWNE, F.R.C.S.

It may seem very trite advice that a baby should be examined from top to toe as soon as convenient after it is born; but any out-patient day at a children's hospital will show that this is very often neglected. It can be seen there what a surprising number of congenital defects have been overlooked for months and even years, in many of them the delay in discovery meaning a vast increase in the difficulty of treatment. Again, there is a curious tendency among medical men to put off treatment in the newly born for no definite reason. As a matter of fact the very young infant in many ways is a better subject for treatment than it is later on. It has little sensitivity to pain, its tissues are malleable to a degree which can only be appreciated on experience, and there is in them a tendency to grow towards the normal that rapidly diminishes even during the first year.

It is impossible in a paper of this length to cover the ground suggested by the title, even if there were any definite division between the major and the minor conditions. But possibly the following sketch of what is to me one of the most interesting and most neglected corners of surgery may be of some use. Most of the conditions calling for surgery in the newborn are, of course, congenital deformities, and they are here arranged according to the processes that have gone wrong in the complicated and irrational formation of the human body.

Extra Formations

Extra toes, fingers, and accessory auricles all need removal—from the mother's point of view as soon as possible. In many cases they are connected with the body merely by a small pedicle, which can be divided by the actual cautery with no bleeding and with almost imperceptible pain. In more severe deformities—for instance, when an extra digit has a corresponding metacarpal—it is better to wait till the child is stronger and the parts are larger before attacking it. If an operation is put off for such reasons it is usually worth while waiting till weaning is complete and the danger of enteritis consequently much less, especially if admission to hospital is necessary.

Abnormalities that may be put in this category, though it has much in common with new growths, are the haemangiomas or naevi. These are of many different kinds and correspondingly have different prognoses.

A faint reddish marking is often to be seen on the forehead and occiput of the newborn. This disappears spontaneously.

Spider Naevus.—This usually appears later in life, and is a tiny bright-red speck with radiating vessels. It often disappears spontaneously, never grows larger, and if objectionable can be easily destroyed by a light touch of the cautery or a fine point of carbon dioxide snow.

Port-wine Stain.—This is a perfectly homogeneous velvety-looking overgrowth of the capillaries of the whole thickness of the skin. It never changes in area through-

out life, though its vessels enlarge slowly until finally it has a typical warty appearance in later life. Treatment is most disappointing; I know of none really satisfactory.

Cutaneous and Subcutaneous Angiomas.—This group varies from the superficial easily treated "strawberry mark" to those rapidly increasing growths of the face which provide some of the worst and least necessary tragedies of childhood. Because many growths of the type disappear spontaneously an unfortunate notion is at large among doctors that they all do. Nothing could be more dangerous than this assumption. A continually recurring tale in the out-patient department is that of the mother who notices a small red spot on her baby's face at or soon after birth. She asks her doctor for advice and is told that it is a birthmark and of no importance. A month or so later, with the mark rapidly enlarging, she asks again, and it is treated with carbon dioxide snow. This freezes the superficial layers of the skin but is quite without influence on the rapid growth in the subcutaneous tissues that is proceeding. When the growth is many times its original size she may, if lucky, meet someone who knows that the treatment for such a growth—once the early stage in which it could have been destroyed by a single cautery touch has passed—is the skilled application of radium. It cannot be too strongly stated that a naevus of a baby's face that shows the slightest tendency to enlarge is a surgical emergency.

Failures of Fusion and Migration

Cleft palate should be discovered by the doctor, if one is in charge of the birth, though the announcement is often left to a triumphant aunt. Umbilical hernia can in most cases be cured by simple strapping if this is persistently carried out. The efficiency of treatment decreases with its complication. Pennies embedded in the plaster are comparatively harmless; conical pads attached to it must tend to enlarge the hole rather than to close it; and the extreme of uselessness is reached in the popular and expensive rubber belt with pneumatic pad.

The most common and important of the failures of migration is the "undescended testicle." Now that it is becoming realized that those testicles which can be felt above the pubis are never in the inguinal canal the prognosis is becoming much clearer; and it is possible, in about 80 per cent. of cases in which the testes are not in the scrotum, to assure the parents that there is no need to worry.

Failures of Atrophy

Congenital Adhesion of the Labia Minora.—An interesting example of this is the case in which in place of the vulva there is merely a small opening through which urine passes, usually spurting forwards in the male direction in a characteristic way. I have known many serious prognoses to be given in these cases and various techniques for constructing artificial vaginae to be gravely discussed. All that is necessary is, with a probe passed through the forward opening, to tear the filmy strip of epithelium that unites the two sides.

Umbilical polyps are treated by cauterization.

Syndactyly should be left till the fingers are large enough for the easy application of the necessary full-thickness graft. The various operations copied from one

textbook to another which purport to supply the missing skin by various shiftings of the coverings of the joined fingers are worse than useless; they often cripple badly what was a very useful hand, owing to scar contraction that pulls the fingers sideways.

Moulding Deformities

Talipes is hardly a minor condition, but the difficulty of treating it is vastly increased by the advice so commonly given to put off treatment for several months. There is, however, one variety that can usually be cured permanently in the first month—that of metatarsal varus. The foot is bandaged by sticking-plaster on a light aluminium foot-piece (I use one off my stock hobble-splint) forced into metatarsal valgus over a fulcrum formed by a piece of chiropodist's adhesive felt. There is no muscular pull tending to reproduce the deformity, so that, once corrected, it does not relapse.

Crooked toes and fingers, which are so difficult to treat in later life, respond amazingly well to correction in the first few days of life in the very rare cases in which this is applied. One occasionally meets a variety of "talipes of the hands" which consists in fixed flexion of the fingers. If allowed to persist this is a most intractable and crippling deformity, but it yields easily to a few weeks' hyperextension on a splint if this is done very early.

Postural torticollis due to intra-uterine malposition is self-correcting, though for the first few months it may be very pronounced. It is interesting to observe how it invariably corresponds to a moulding of the head which has the exposed side flattened by the pressure of the uterine wall. More severe cases may be extremely difficult to treat, and I have known several complicated by facial paralysis due to the jamming of the facial nerve against the point of the shoulder on the affected side.

Scoliosis in its minor degrees responds very well to a few months on a plaster bed in the converse position to that in which the baby has been lying *in utero*; but here once again the ease of correction depends almost entirely on the earliness of treatment.

Lop-ears can be treated by fastening back with sticking-plaster, though in the severer cases this is not enough.

Disproportions

Under this heading I would place a miscellaneous group.

Phimosis is by no means as common as non-ritual circumcision, but it does occur fairly often. In circumcision I recommend leaving the frenal region untouched; it is the area of maximum sensitivity, it is one where scar contraction is a serious disability, and it is the commonest site of bleeding. (As in tonsillectomy, serious bleeding after operation is due to veins and is almost invariably blamed upon arteries.) Another important point is that if the orifice of the prepuce is small enough to require a circumcision the meatus is almost invariably unduly small as well, and needs enlarging. Failure to do this usually means trouble from meatal ulceration afterwards. Stretching the prepuce is very painful, and, I think, quite useless in cases in which any intervention at all is necessary.

Tongue-tie is a very rare deformity in a degree requiring operation. I think it is necessary to free the tongue if its tip cannot be brought out past the gum of the lower jaw; I have seen a most pronounced immediate improvement in speech from doing this in later years. But simple cutting is not enough: the frenum tends to heal up

exactly as it was. It should be cut transversely and then stitched up longitudinally in the sagittal plane—an operation that needs a general anaesthetic and proper equipment.

Congenital enlargement of the adenoids to such a degree that they interfere with sucking is not very uncommon. Their removal in suitable cases has a marked and immediate benefit in the newborn, as later in life. It is, however, impossible to buy a stock curette small enough for this if one desires to leave the Eustachian cushions untouched. However, examination of the adenoid tissues removed in the usual tonsil-and-adenoid operation for pieces of cartilage will show that this point is not as a rule considered of importance.

Tight anus should be suspected if a baby appears to have pain and difficulty in passing a stool. The insertion of the male adult finger is enough to correct it.

Birth Injuries

These are usually obvious. The fractures correct themselves in the most amazing manner. Indeed, the only really bad result I have seen from a birth fracture of the femur came from a case in which I gave the anaesthetic while an enthusiastic admirer of Sir William Arbuthnot Lane plated the break.

In some very large haematomata of the scalp I think that aspiration followed by firm bandaging is good treatment, but of course most of them merely need to be left alone.

Nova et Vetera

THE LIFE AND DEATH OF SIR JOSHUA REYNOLDS

As the result of extensive literary research Dr. Ernest E. Irons (*Bull. Soc. med. Hist. Chicago*, 1939, 5, 119) comes to the conclusion that the last illness of Sir Joshua Reynolds was caused by a malignant tumour of the liver secondary to a growth in the left eye. The medical history of the great painter was as follows. Apart from an attack of small-pox at the age of 12, and a brief but severe illness of unknown nature at 41, he remained in good health until 59, when he had a slight "paralytick" attack from which he recovered completely. At 67 he lost the sight of his left eye; the right eye was not affected. His general health, however, remained good until the age of 68, six months before his death, when the affected eye became painful, the liver became much enlarged, and loss of weight occurred. His death took place on February 23, 1792. The necropsy was carried out next day by Sir George Baker, John Hunter, and E. Home, whose report was as follows: "On examining the body we found no marks of disease in the cavity of the breast except only a slight adhesion of the lungs to the surrounding membrane on the left side. In the cavity of the belly the only diseased part was the liver, which was of a magnitude very uncommon and at least double of what is natural: it weighed eleven pounds, and was of a consistence which is usually called scirrhus. It had lost its natural colour and become of a pale yellow. We found the optic nerve of the right [*sic*] side shrunk and softer than natural. There was more water in the ventricles of the brain than which is generally found at so advanced an age."

Dr. Burton Chance, the ophthalmologist of Philadelphia, whose *History of Ophthalmology* in the *Clio Medica* series recently appeared, has contributed to the *Annals of Medical History*¹ an article on "Sir Joshua Reynolds and his Blindness and Death."

¹ Chance, B. (1939). *Ann. med. Hist.*, 3 s., 1, 487.