tumours arise from a developmental fault of the central nervous system, so these lesions may occur in any of the organs innervated by filaments from that neuromere. Appreciation of the skin naevi in this case enabled a correct pre-operative diagnosis to be made.

Summary

A case is described of angioma venosum racemosum of the cervical spinal cord associated with angiomata of the omentum and skin naevi of the same metameres. The diagnostic value of the cutaneous lesions is stressed.

I wish to thank Dr. Eliot Mackworth and Dr. Philip Buckley for permission to publish this case, and to express my appreciation of the efforts of Dr. L. Potaschmacher for his painstaking post-mortem examination.

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Medical Memoranda

Two Cases of Tetanus Neonatorum Treated with Penicillin and Aureomycin

Umbilical tetanus is fortunately rare in the British Isles; possibly for this reason the literature on the subject is relatively scanty, and standard textbooks do not deal fully with the use of modern drugs in this condition. W. Sheldon, for instance, in his *Diseases of Infancy and Childhood* (5th edition, 1946, p. 24), recommends 20,000 units of antitetanic serum (A.T.S.) and sedation with chloral and magnesium sulphate. He does not mention the use of the sulphonamides or penicillin. The following cases may therefore be of interest. Both occurred before the end of the second week of life, and made a complete recovery.

CASE 1

An African boy aged 7 days had a history of constant crying. On examination some tendency to rigidity of limbs but no definite spasm was seen. The umbilical wound had not healed and was dirty and plastered with leaves. His temperature was 99° F. (37.2° C.) and pulse 130. Heart and chest were normal. He was given A.T.S., 100,000 units immediately, and penicillin "G," 200,000 units four-hourly, and the cord was dressed with sulphanilamide powder. By the afternoon of admission muscular spasm and trismus of the jaws was obvious. Sedation with chloral hydrate and potassium bromide, 15 gr. (1 g.) of each four-hourly per rectum, was begun. Any reduction of this dose at once resulted in a return of the spasms. For the first 24 hours no attempt was made to pass a nasal catheter, and fluid was given per rectum—2½ oz. (70 ml.) of water two-hourly.

On the second day four-hourly nasal feeds of expressed breast milk were given, but the water per rectum was continued, to guard against dehydration. For five days the whole of this quantity was retained. On the third day penicillin was reduced to 100,000 units four-hourly, and sedation continued. It was now found that the child could swallow, and part of the feeds was given by syringe. As soon as the child tired of swallowing, the tube was passed to complete the feed. On the fifth day he was sucking the syringe strongly; part breast-feeding was begun; phenobarbitone, 1 gr. (65 mg.) four-hourly, was substituted for bromide and chloral; and rectal fluids were discontinued. On the seventh day he was fully breast-fed and phenobarbitone was discontinued. He was discharged in good condition on the ninth day. Two days later he was seen at the clinic. He was then perfectly well and there was no residual stiffness.

CASE 2

An African girl aged 9 days was brought to hospital because she was unable to suck. The child was crying continuously, with risus sardonicus, clenched fists, stiffly extended legs, and taut abdomen. Handling produced convulsive arching of the spine. The umbilical wound was 1½ in. (3.1 cm.) across, moist, and filthy. Her temperature was 100° F. (37.8° C.) and pulse 134. Her heart and chest were normal. She was admitted at once (February 13, 1951). A.T.S. was not obtained till February 17, when 100,000 units was given. Treatment was carried out on exactly the same lines as in Case 1, but the violent reactive spasms remained unabated for seven days, although the child was quiet unless touched. It was necessary to aspirate four-hourly, or more frequently, with a rubber mucus catheter, the nurse summoning medical aid for this purpose each time the child became cyanosed or showed difficulty in breathing. Without these ministrations she would undoubtedly have died. Passing the catheter to the back of the mouth and directing it to the epiglottis was made difficult by the jaw trismus.

On February 19, as the temperature had not responded to penicillin, "aureomycin," 250 mg. four-hourly, was substituted. From this time onwards the improvement was marked and steady, except for one setback. During a nasal feed on the 21st the child suddenly collapsed and ceased to breathe. She was restored by artificial respiration and nikethamide. No feed had been inhaled, and the collapse may have been due to vagal inhibition coupled with respiratory spasm. Curiously enough, the child appeared much better the day after this episode. The aureomycin was now reduced to 120 mg. four-hourly. On February 22 all reactive spasms had ceased and the child could be handled gently without arching of the spine resulting. Nevertheless the whole body remained stiff, especially the legs, which were all the time held stiffly extended except in sleep, when they relaxed slightly. The fists remained clenched and the head retracted. Phenobarbitone, 1 gr. (65 mg.) four-hourly, was substituted for the other sedatives. Massage and movements were started, and in eight days the limbs were back to normal. The aureomycin was discontinued on February 22 (total 3,000 mg.).

COMMENT

Only one dose of A.T.S. was given owing to local shortage. The successful outcome in Case 2, which was in all respects extremely severe, suggests that delay in giving A.T.S. need not prove fatal. It seems logical to give large doses of penicillin or of a sulphonamide, because septicaemia is a strong probability. It is interesting to note the response to aureomycin in Case 2. The very high fluid intake would seem to be necessitated by the muscle spasm, which no doubt increases the body's needs. It may possibly help to prevent serious consequences from the heavy sedation. It is certain that in Case 2 the patient would have died from pneumonia, if not from asphyxia, had she not been aspirated frequently.

MARY E. EGERTON, M.B., B.S., M.R.C.O.G.

A Combination of Congenital Anomalies

It is well known that the presence of one congenital defect in a person should make one examine for the presence of other anomalies. The following case illustrates this fact.

CASE REPORT

A female Bantu child weighing 4 lb. 5½ oz. (2 kg.) was born in the maternity section of Baragwanath Hospital on September 26, 1950. She was premature, of approximately 36 weeks, and delivery was very rapid. She was noticed to be blue from birth. She did not cry or breathe after birth, but the heart was beating strongly. Lobeline was given by injection, the air passages were cleared, and oxygen was administered. She soon started to breathe, but remained

extremely cyanotic. The placenta was circular in shape and appeared to be normal. The umbilical cord was centrally inserted in the placenta, but was only 8 in. (20 cm.) in length.

The baby was the second infant of the mother, who gave no history of any illness during this pregnancy.

On examination the patient was seen to be a newborn female infant showing well-marked cyanosis, especially around the lips and tongue. Her rectal temperature was 97.8° F. (36.6° C.). The umbilical cord stump appeared normal and healthy, with no evidence of sepsis or bleeding. The infant had supernumerary nipples placed in a line between the axilla and groin of each side; there were three extra nipples on the right side and four on the left (Fig. 1).

The fingers and toes were longer than normal. There was a flexion deformity of the second, third, and fourth right fingers and of the third left finger (Fig. 2). The palate was highly arched. No obvious anomaly of the eyes was noticed. The heart rate was 136 a minute. Clinical enlargement of

the heart was present. No thrills or murmurs were detected. Nothing abnormal was found in the lungs. Neither the spleen nor the liver was palpable.

Investigations.—A blood count showed: haemoglobin, 24 g. % (Sahli); erythrocytes, 6,780,000 per c.mm.; leucocytes, 5,100 per c.mm. (neutrophils 39%, monocytes 12%, lymphocytes 37%, eosinophils 10%, basophils 1%, plasma cells 1%); P.C.V., 74%. The red cells showed anisocytosis and an occasional polychromatic staining cell. One nucleated red cell per 100 leucocytes was observed.

The standard Eagle test was negative. An electrocardiogram showed: rate 150, normal sinus rhythm, heart vertical in position, and right ventricular dominance. On radiological examination the heart was much enlarged, with the toe considerably elevated. On screening, there was well-marked enlargement of the right ventricle. There was a fusion anomaly of the tenth and eleventh right ribs. The skull and spine were normal. Elongation of fingers was noted, with the deformities of the second, third, and fourth right and third left fingers.

At this stage the case presented as one of supernumerary nipples, partial arachnodactyly, minor fusion anomaly of two ribs, and cyanotic congenital heart disease. The exact type of cardiac defect was discussed with the following differential diagnoses in mind: Fallot's tetralogy, transposition of the great vessels, common truncus arteriosus, and tricuspid atresia. The last-named was dismissed as a diagnosis in view of the electrocardiographic finding of a right ventricular dominance and of the x-ray evidence of enlargement of the right ventricle: in tricuspid atresia one finds a left ventricular enlargement with left dominance in the electrocardiograph.

The child remained cyanotic until she died on the sixteenth day of life. Throughout this period no murmurs were detected on frequent careful auscultation of the heart.

At necropsy cyanosis was present. The accessory nipples were noted, as were also the long fingers. The palate was highly arched. The lungs, bronchi, and trachea were normal. The heart was enlarged, especially the right ventricle. A high ventricular septal defect was present over which the aorta was straddled. The aortic arch was right-sided. No evidence of a ductus arteriosus was found. An extreme degree of pulmonary stenosis was present. The oesophagus, stomach, and intestines were normal, as were the liver, spleen, and pancreas. The renal system showed the presence of a typical horseshoe kidney. The brain was normal. The fusion of the tenth and eleventh right ribs was noted.

The diagnosis was, therefore, one of multiple congenital defects: supernumerary nipples, partial arachnodactyly, Fallot's tetralogy with a right-sided aortic arch, horseshoe kidney, and fusion of two ribs.

COMMENT

This case illustrates a combination of congenital anomalies, and particularly that of supernumerary nipples and arachnodactyly with congenital heart disease, as mentioned by Paul Wood (1950) and Brown (1939). Here, in addition, we have the kidney anomaly and the minor rib abnormality. The Fallot tetralogy is associated with a right aortic arch, which association occurs in about 20% of cases.

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I. KESSEL, M.B., M.R.C.P., D.C.H.,
Assistant Paediatrician, Department of Paediatrics,
Baragwanath Hospital, and University of
the Witwatersrand, South Africa.

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FIG. 1.—Photograph showing supernumerary nipples and anomaly of fingers.

FIG. 2.—Radiograph of hands showing deformities of second, third, and fourth right and third left fingers, and length of fingers.