ogen assay would be a good method of estimating the success of gastrectomy.

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HAEMORRHAGIC CHICKEN-POX

TWO FATAL CASES

BY

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Chicken-pox is a benign disease with minimal complications and a very low mortality. Death occasionally supervenes as a result of one of the following complications: sepsis; haemorrhagic manifestations; renal, neurological, or haematological sequelae (Lander, 1955; McLachlan, 1957). Recently several fatal cases of haemorrhagic chicken-pox have been reported after cortisone therapy (Haggerty and Eley, 1956; Bernheim *et al.*, 1956; Nichols, 1957). It is also well known that severe infections are common in association with diseases of lymphoid tissue.

Two fatal cases of haemorrhagic chicken-pox are here reported: one patient had been treated with cortisone, and the other was a known case of Hodgkin's disease with enlargement of the spleen and lymph nodes.

Case 1

The patient, a boy aged 13, was admitted to hospital on February 5, 1958. A diagnosis of tuberculous meningitis was made, and treatment was immediately started with intramuscular and intrathecal streptomycin along with isoniazid and cortisone. He was given 100 mg. of cortisone intramuscularly each day for two days, followed by 50 mg. three times a day by mouth for two days, after which the dose was increased to 50 mg. four times a day.

On February 24 four vesicles appeared on his trunk and within a few hours the rash had covered the whole body and chicken-pox was diagnosed. Several cases of this disease had recently occurred in his school and all had taken a normal course. On February 27 he passed blood-stained urine, and had a haematemesis and an epistaxis.

The rash became extensively haemorrhagic, and he died on February 28. Permission for a necropsy was not obtained.

Case 2

This patient was a woman aged 34. Hodgkin's disease had been diagnosed three years previously and her general condition had been satisfactory after radiotherapy. On January 17, 1959, she felt unwell and discovered "spots" on her trunk. Her family doctor diagnosed chicken-pox, and it was noted that another member of the household had had an attack of herpes zoster at the end of December, 1958. On January 20 the rash was very extensive, and one of us (A. M. N.) was consulted and confirmed the diagnosis of chicken-pox. Two days later the patient was very distressed, with a poor colour and rapid respirations. Signs of consolidation were found over the right lung and she was sent into the isolation hospital. On admission her general condition was poor. The extremities were cold and blue; temperature 101° F. (38.3° C.); respirations 46; pulse 130 a minute. The trunk was covered with a haemorrhagic papular eruption, which was also present on the face. The forearms and legs were relatively free of lesions. Consolidation of the right lung was confirmed. In spite of active treatment she collapsed and died at 10.30 p.m. the same day.

A post-mortem examination was performed 16 hours after death (R. W. P. J.). The body was that of a slim well-nourished young woman. There was an extensive confluent haemorrhagic vesiculo-papular eruption involving the trunk and face. Lesions were scanty on the arms and thighs, and there were none on the hands or below the knees. Similar lesions were found in the oesophagus. The trachea and main bronchi contained mucus. There were many subpleural haemorrhages, and both lungs showed bronchopneumonic consolidation. The spleen was greatly enlarged, weighing 40 oz. (1,135 g.), and was extensively infiltrated by greyish neoplastic tissue. There were many enlarged glands along both sides of the abdominal aorta and in the mediastinum. The liver was pale and soft. Serum and scrapings from the skin vesicles were tested for smallpox; the complement-fixation test and egg cultures were negative for the variola-vaccinia group viruses.

Discussion

Cortisone may have an untoward effect on infectious diseases, including bacterial, fungal, and virus infections, and it has been shown that the drug inhibits antibody production (Haggerty and Eley, 1956). Infections occur with great frequency along with diseases of lymphoid tissue, and agammaglobulinaemia may occur in disease of the reticulo-endothelial system such as Hodgkin's disease (MacCallum, 1959; Kaplan and Smithers, 1959).

Chicken-pox is normally such a mild disease that it is apt to be regarded as of little importance, but severe and even fatal cases have been described in patients undergoing cortisone therapy (Shee and Fehrsen, 1953; Haggerty and Eley, 1956; Bernheim *et al.*, 1956). In these cases the cortisone had presumably inhibited the normal production of antibodies. Haggerty and Eley state that in some cases of chicken-pox cortisone has no apparent ill effect, but in others the skin manifestations are unusually severe, and they had seen two children who died in a state of shock.

When confluent haemorrhagic vesicular eruptions are encountered, smallpox must be considered as a possible diagnosis, but in the two cases described above the diagnosis of haemorrhagic chicken-pox was confidently made on clinical grounds and confirmed by subsequent events. It is suggested that in these two cases the

antibody response to the varicella virus had been modified—by cortisone therapy in Case 1 and by the infiltration of the reticulo-endothelial system in Case 2. It appears that chicken-pox may be a very serious disease in patients who are either undergoing cortisone therapy or who are suffering from a disease of the lymphoid tissue. If a patient on cortisone develops chicken-pox, serious consideration should be given to the advisability of withdrawing the drug, or at least reducing the dose; and it may also be worth while giving the patient convalescent varicella serum (Nichols, 1957).

Summary and Conclusions

Two fatal cases of haemorrhagic chicken-pox are described. The antibody mechanism had been upset in one by cortisone therapy, in the other by neoplastic infiltration of lymphoid tissue. It may be necessary to modify cortisone therapy if chicken-pox supervenes.

We thank Dr. H. G. McGregor for permission to use his notes on Case 1; Dr. L. Lennhoff and Dr. S. A. Tillyard for clinical details of Case 2; Dr. W. S. Parker for advice; and Dr. J. E. Jameson and Dr. F. O. MacCallum, of the Public Health Laboratory Service, for help with the tests for smallpox.

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Medical Memoranda

A Case of Locked Twins

Cases of locked twins would seem to be rare enough to warrant publication. The incidence is quoted as 1 in 1,000 twin labours (Nissen, 1958), and in addition to its rarity it is a disconcerting hazard, occurring as it usually does late in the second stage of labour.

Lawrence (1949) classified the various types of foetal interlocking and the high incidence in cases of twin labour with the breech-vertex combination, as was the case in this instance.

CASE REPORT

An unmarried primigravida aged 37 was admitted as an emergency case in labour with a twin pregnancy of 37 weeks' duration. On examination the membranes were intact, the first twin was in the left sacro-anterior position, and the second twin presented as a vertex. Both foetal hearts were easily audible and of regular rhythm; uterine contractions were regular and frequent.

Labour progressed uneventfully, and a vaginal examination after spontaneous rupture of the membranes confirmed the presentation of the first twin; the cervix was dilated three fingerbreadths, and no loop of umbilical cord was palpable.

After full dilatation of the cervix, with descent of the breech, medical aid was summoned. On arrival both legs were visible at the introitus, uterine contractions were strong and regular, and there was no evidence of foetal or maternal distress. Episiotomy, after local perineal infiltration, aided delivery of the buttocks. The body as far as the umbilicus

was allowed to deliver spontaneously, a loop of cord was brought down, and the arms were delivered without difficulty.

Further progress was slow despite traction on the buttocks and suprapubic pressure. This was surprising, as the baby was small and the pelvis known to be of adequate size. Vaginal examination then revealed the vertex of the second twin firmly impacted with the aftercoming head of the first twin in the pelvic cavity. Manual disimpaction under general anaesthesia was attempted but failed. Decapitation of the first twin was then performed, as it showed no signs of life. The decapitation, using strong curved scissors, was facilitated by shoulder traction. Removal of the body of the first twin then allowed the easier disimpaction of the severed free head.

The lie and presentation of the second twin was confirmed, the membranes were artificially ruptured, and a living female child of 4 lb. 1 oz. (1,840 g.) was delivered by forceps extraction. Manual extraction of the free head, by combined suprapubic pressure and traction by a finger in the mouth, proved relatively easy. Delivery of the placenta was performed manually, after the injection of 0.25 mg. of ergometrine intravenously. The progress of both mother and baby was satisfactory.

COMMENT

The cause of this rare complication has not been satisfactorily explained; none of the various theories are entirely satisfactory, but undoubtedly the element of chance plays a great part.

The diagnosis can usually be made only late in the second stage of labour, but it is suggested that this complication should be considered in any twin labour where there is failure of descent of the presenting part in the presence of good uterine contractions, an adequate pelvis, and no evidence to suggest a hydrocephalic monster, but particularly in cases with a breech-vertex combination.

The decapitation of the first twin in this case was an unavoidable expedient, but it might have been prevented by earlier careful vaginal examination, prior to traction on the buttocks with fundal pressure, which resulted in firm impaction and did not allow manual disengagement.

Suggestions regarding treatment must necessarily be retrospective, as no large single series of cases is available on which to base a uniform approach. The treatment, however, depends on the type of locking, the duration of the locking, and the level in the pelvis at which locking has developed. Cases with interlocking of the forecoming heads in the pelvic brim are best treated by caesarean section (Dawson, 1936). Usually delivery by the vaginal route must necessarily be performed. Manual disimpaction may prove successful in the early cases where there has been no traction on the buttocks, and when the locking has occurred at the level of the ischial spines and has been of short duration. Later on, some form of destructive operation to achieve delivery is necessary, as in the case reported.

The prognosis for the first twin is very poor. Nissen (1958) noted a 60% mortality in all cases reported in the literature. The second twin has a far better outlook, but there should be no delay in the delivery, either by forceps extraction or by breech extraction.

I thank Mr. W. H. Peek for his help and for permission to publish this case.

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