well marked though patchy fibrosis of the thyroid, though there was no other reason to suspect the case as syphilitic, and the other organs showed no syphilitic change.

It would seem, therefore, that where—especially in a premature or syphilitic infant, in which the vessels are particularly apt to give way under strain—a fairly acute congestion of the lungs occurs, the capillaries in the alveolar walls may give way and suddenly flood the air passages (alveoli and bronchi) with blood, invariably causing sudden death, the only preceding physical sign being the blanching of the skin and epistaxis. The congestion may be due to an organism of normal or increased virulence, or it may occur in the absence of any organism and may then be possibly of the nature of an anaphylaxis. The condition is not limited to premature or syphilitic infants, but may also occur in full-time and previously healthy infants, though in these the congestion probably requires to be more acute and of greater degree. This "acute haemorrhagic pneumonia of infants" forms a distinct clinical and pathological entity and accounts for many of the sudden deaths occurring in infants previously apparently healthy.

Summary.

1. Pneumonia is a common cause of death amongst infants during the first week after birth, and accounted for 21 deaths out of 80, or 26 per cent.
2. It is sometimes due to ante-natal infection from premature rupture of the membranes, and the infant may be not only infected but also suffering from an advanced stage of pneumonia before its birth.
3. In the infant there is little defensive reaction as compared with the adult against the infecting agent.
4. Pneumonia in the first few days of life is an extremely insidious disease, generally presenting no characteristic symptoms which might lead to its presence being suspected and the carrying out of physical examination.
5. Even at *post mortem* examination the presence of the disease may be missed if microscopic examination of the lungs is not carried out.
6. "Acute haemorrhagic pneumonia of infants" forms a distinct clinical and pathological entity which gives rise to sudden death in children who may be apparently previously healthy, either full-time or premature. It follows acute congestion of the lungs, the fragile vessels in the alveolar walls rupturing and flooding the alveoli and bronchi with blood. The sudden death is preceded by epistaxis and blanching of the skin, and the etiological factor may be organismal or possibly of the nature of an immediate anaphylactic reaction.
7. The importance of avoiding premature rupture of the membranes during labour, and of taking every precaution to safeguard the newly born infant against infection, cannot be over-emphasized.

A CASE OF DISSECTING ANEURYSM OF THE AORTA.

BY

SIR HENRY DAVY, K.B.E., C.B., M.D., F.R.C.P.,

AND

MABEL GATES, M.D. LOND.

[With Special Plate.]

THE patient, a man aged 55, had usually enjoyed good health. He was a married man with three grown-up healthy children, and had led a very active life as a master baker; he frequently lifted heavy weights (large baskets of loaves, etc.) in his business. Once a month he went to London and back in the day to attend a meeting as a director.

He first consulted Sir Henry Davy in June, 1914, for papular eczema on his right leg and left arm; the papules in many places formed small sores, but were easily cured with ordinary treatment. In 1915 and 1916 he was seen twice with two attacks of slight influenza. In 1919 he had a rather severe bleeding from the nose, and was attended by Dr. Andrew. A few months after this he had another attack, when he was sent to Mr. Worthington, who found and speedily cured an ulcer on one of the nostrils. He was seen twice in 1920 with a return of his rash, and then it was noted that he had a rather high blood pressure (180 and 183), but he quickly got rid of the rash and was under no medical attendance from December, 1920, until November, 1921.

History of Attack.

On October 31st, 1921, he felt quite well, and went to London, leaving Exeter by the 7 a.m. train, and returning at 9.30 p.m. He went to bed, slept well, and got up and went to business the next morning as usual. There is no clear history of what work he did that morning.

About 10 a.m. on November 1st he felt discomfort in his chest and stretched his arms backwards. Almost immediately he was seized with intense pain in the region of the heart and became very ill indeed. Dr. Mabel Gates, who attends his wife and daughter, saw him almost immediately. She found him "with intense pain in the region of the heart, collapsed and sweating, with a quick irregular pulse, and apparently dying." Sir H. Davy joined Dr. Gates just before 11 a.m., and found that the patient had somewhat recovered under her treatment with amyl nitrite. His pulse was very quick, but regular. He was pale and somewhat collapsed. He complained of a sharp intense pain, which he said started from the nipple in front and passed straight to almost the same level of the spine behind. This pain prevented his keeping still for a minute. He was constantly up and down in bed, and in and out of it, trying by change of position to get ease.

As the pain continued in spite of nitroglycerin and amyl nitrite, he was given an injection of morphine gr. 1/5 at about a quarter to 12, after which the restlessness nearly ceased, although he still said he was in pain. When we saw him again together at 9 p.m. he was quiet, his pulse had recovered considerably, and was 64 to the minute, and his temperature was subnormal, 97°. He still, however, complained of pain. Up to this time we could not examine him at all thoroughly: he was too restless and too ill. But on superficial examination of the heart and lungs there was nothing very definite to be found. We ordered another injection of morphine gr. 1/4, to be repeated after six hours if necessary.

Discussing the condition together, we could not arrive at any definite conclusion. The pain in the region of the heart, the quick irregular pulse, together with the collapse and sweating, might have gone very well with angina. But the restlessness was altogether unlike it. At our next visit the following morning we found the conditions entirely changed. He had passed a fairly good night, sleeping at intervals, and taking a fair amount of milk and water as nourishment. The pain had not been so severe and no second injection had been needed. Examination showed—

1. The area of cardiac dullness was much increased, extending upwards to the second rib on the left side, downwards about 2½ or 3 in. below the nipple line and outwards to about 3 in. outside the nipple line.
2. The heart was visibly displaced in accordance with these measurements, being pushed downwards and outwards. The area of pulsation corresponded with the areas described, and the apex beat was in a line with the axilla.
3. There were no adventitious heart sounds, and there was no bruit over the aorta, either back or front. The blood pressure was 180.
4. On turning the patient on his side a small area of dullness was found at the base of the lung; there was a want of entry of air all over the back of the chest, and an impaired note of resonance over a much greater area than the dullness.

It was evident that we had not to do with an ordinary case of angina, and, after discussing all the symptoms carefully, we came to the following conclusions:

1. That the heart had been displaced downwards and outwards by the formation of an aneurysm in the neighbourhood of the arch of the aorta.

2. That this had developed more or less slowly with intense pain, and that therefore it was probably due to a dissecting aneurysm.

3. That the dullness at the base of the left lung showed that there was a leakage of blood into the left pleura.

The intense pain I have described led us to diagnose a dissecting aneurysm. Once before one of us had had an opportunity of observing the sudden formation of an aortic aneurysm.

A delicate lady with a very bad family history, who was accustomed to no muscular work, decided to roll her own lawn with a rather heavy new roller. After doing so for some little time she was suddenly seized with a pain in the back. Both she and her husband, who was a doctor, thought she had just strained her muscles or had rheumatism from the unusual work. I saw her ten days after, as the pain continued. Careful examination revealed a small pulsating tumour in the abdominal aorta, just above its bifurcation into the iliac arteries. In my opinion the pulsation was distinctly expansile, and I diagnosed an aneurysm which had suddenly developed during the rolling. The pain was

never very intense, but it continued. Abdominal, or for that matter any, aneurysm is so rare in a woman that neither the husband nor any of his medical friends believed in my diagnosis. Eventually the patient saw by my wish an eminent London surgeon, who scoffed at the idea of an aneurysm, and promised immediate relief by removing an ovary adherent to the aorta. However, at the operation he found no such adherent ovary, but a well-marked aneurysm, and the patient has continued to suffer pain ever since.

But this case and other recorded cases did not suffer from the intense pain and restlessness displayed in our case. Dr. Gates and I thought, therefore, that we were dealing with a dissecting aneurysm, and that the separation of the coats of the aorta was the cause of the intense pain described. A dissecting aneurysm would also more probably account for a small leakage of blood into the pleural cavity, and so for the dullness found at the base of the left pleura.

Having, then, made our diagnosis, we thought we might get confirmation of it by an x-ray photograph, and Dr. Hodgson, head of the electrical department at the Royal Devon and Exeter Hospital, having a movable apparatus that he can take to patients' houses, we asked him to take a radiogram of the chest. This he did three days after the onset, and this radiogram (see Special Plate) clearly shows an aneurysm arising near the arch of the aorta.

The patient lived for nineteen days after the onset of the symptoms, being kept quiet in bed, and his pain kept in abeyance by an injection of 1/4 grain of morphine night and morning. On two occasions during this time he had severe attacks of pain with collapse, caused once by his getting out of bed against orders, and once by his getting excited about something. The temperature was at first slightly raised (99° to 100°) for four days, it was then normal for three, and then there was a rise to 101° every evening, falling to about 99° in the morning. His systolic blood pressure was at first 200 to 195, but towards the last week it varied between 162 and 159. The physical signs on the left side of the chest varied, owing to an increasing amount of fluid forming in the chest, due, as it turned out, to increasing pleuritic effusion. No bruit was to be heard over the heart or over the aorta until the day before his death, November 18th, when a well-marked humming bruit was heard over the aorta behind at the level of the fourth dorsal vertebra. On November 19th he was quiet and free from pain all the morning, but at about 4 p.m. he said he felt faint and died almost immediately. A *post-mortem* examination was performed by Dr. Solly, pathologist to the hospital, the next day, and his account is as follows:

The left pleural cavity was sealed by adhesions, and on opening this blood-stained fluid was seen, and a large amount of blood clot, mostly recent, but some of some days' standing, was removed. The heart was enlarged and showed hypertrophy, particularly of the left ventricle, but there was no valvular disease present. There was a definite dissecting aneurysm, about the size of a small orange, at the apex of the transverse arch of the aorta, caused by the rupture of the inner coat of the aorta at this situation, where it was definitely weakened by calcareous patches of atheroma. This dissecting aneurysm had ruptured into the left pleural cavity and so caused death from haemorrhage.

TRAUMATIC ARTERIO-VENOUS ANEURYSM.

BY

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[With Special Plate.]

In October, 1918, a man aged 49 fell from a bicycle, receiving a severe blow on the right side of the crown of the head. He was unconscious for several hours. A fortnight afterwards the left eye became prominent and its vision defective. Within another week the right eye began to protrude, and he was sent into Darlington Hospital by Dr. Williams of Richmond (Yorks).

On admission his appearance was as shown in Fig. 1 (see Plate). Both eyes were in a state of extreme proptosis, the conjunctivae chemosed, oozing a bloody serum and projecting in thick rolls between the lids and the corneo-scleral junction. Both corneae had lost their lustre, and their ground-glasslike surface prevented a clear view of the fundus. The pupils were slightly dilated, and vision in each eye was only 6/6. Speech was slow and the mental condition sluggish and depressed. The patient complained of a confused sensation in the head but no real headache. The temperature was normal, and there was no obvious sepsis about the nose or jaws to suggest cavernous sinus thrombosis. No pulsation could be detected about the orbits.

Suspecting arterio-venous aneurysm, I listened over the left temple and heard a loud systolic bruit. This was equally well heard over the right temple. Pressure over the left carotid tubercle silenced this bruit; pressure over the right had no effect.

The injury had evidently caused a fracture of the base of the skull, wounding the left internal carotid artery as it lay in the inner wall of the left cavernous sinus, and producing an arterio-venous aneurysm. Through the circular sinus the arterial pressure had reached eventually the right cavernous sinus, and then proptosis became bilateral.

On October 24th I tied the left common carotid, and the intracranial bruit ceased immediately. In a few days there was less oedema of the conjunctivae, and this improvement continued steadily, the proptosis diminishing *pari passu*. In three or four weeks all oedema had disappeared, and vision in the right eye had improved to 6/6. Vision in the left eye was still only 6/60, and this cornea remained "steamed." The left eye now developed an internal squint, due probably to injury of the sixth nerve by the fracture or by the subsequent arterio-venous aneurysm. As both eyes had been immobilized by oedematous surroundings this paralysis of the sixth nerve was only evident on subsidence of the swelling and return of the mobility.

Ligature of a common carotid is said to be followed by mental symptoms in some cases. In this case no ill effect resulted; on the contrary, the patient became more alert and cheerful.

One of the photographs in the special plate shows the distressing appearance of the man on admission, and the other shows the improvement three weeks after operation. The slight swelling of conjunctiva still visible above the right lower eyelid disappeared entirely during the following week. After leaving hospital the patient was lost sight of, and no information could be gathered about the final result as regards vision of the left eye and strabismus. I am informed that a year after operation he was apparently well and engaged in his usual occupation.

PNEUMOTHORAX IN A BOY AGED 7:

RECOVERY.

CLINICAL AND X-RAY REPORTS.

BY

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[With Special Plate.]

PULMONARY tuberculosis as it occurs in the adult is comparatively rarely found in children. In them thoracic tuberculosis more usually manifests itself as an enlargement of the lymphatic glands at the root of the lung, a condition which can be recognized by physical examination and by radiography. The relationship between pulmonary and glandular tuberculosis and age is not yet by any means clear, and is a very wide subject which lends itself to endless discussion. Some Continental writers, quoting the findings of hundreds of autopsies, assert that tuberculous enlargement of the glands at the root of the lung in children is always secondary to a lung focus or foci.

They describe such a focus in comparison with the adult pulmonary lesion as being usually very small, and state that often in children past infancy it is found to be in a state of arrest, cavity formation having sometimes taken place before this has come about. These foci are usually situated sub-pleurally, but on account of their relatively minute size it is not surprising that clinically, or even radiographically, their presence cannot be often demonstrated, and of course this would be all the more difficult in the case of a focus situated on the diaphragmatic or mediastinal surface. I recently came across a very interesting case of pneumothorax in a boy, aged 7, who had signs of intrathoracic glandular tuberculosis without any evident pulmonary lesion which would appear to be quite possibly an illustration of such a condition. He came under notice as a "contact" to his brother, who was already attending one of the tuberculosis dispensaries under my charge for tuberculous cervical glands, and I first examined him on February 18th, 1920.

His father had an enlarged gland removed from his neck in his youth, but since that time has not shown any evidence of tuberculosis. His mother died in childbirth; she is stated to have usually been in "poor health," for which apparently no definite cause had ever been assigned. There is no other history of tuberculosis in the family.

He was said to have attended school regularly, to be generally full of life and mischief, and rarely complained of anything except

DAVY AND GATES : CASE OF DISSECTING ANEURYSM
OF THE AORTA.

MARTIN AND KNOX : PNEUMOTHORAX IN A BOY.

FIG. 1.—Posterior.

FIG. 2.—Anterior.

ALLARDICE : FOREIGN BODIES IN THE GASTRO-INTESTINAL
TRACT IN APPENDICITIS.

Skigram taken after first operation, showing fork, hairpins, etc., still
in the abdomen.

FARQUHAR : TRAUMATIC ARTERIO-VENOUS ANEURYSM.

FIG. 1.—Showing appearance of the
patient on admission to hospital.

FIG. 2.—Showing improvement three
weeks after operation.