A CASE OF GANGRENE OF THE LUNG

FOLLOWING

NECROSIS OF THE TEMPORAL BONE THE
RESULT OF SCARLET FEVER.

TREATMENT BY DRAINAGE. RECOVERY.

BY

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ELIZA W—, æt. 12, was admitted into the Middlesex Hospital under the care of Dr. Cayley on January 18th, 1884.

Her mother stated that she had always been a fairly healthy child, but four years ago had had an attack of scarlet fever and was for three months in the London Fever Hospital. On leaving there was a discharge from the left ear which continued for two years and then ceased. She appears to have been deaf with this ear since the scarlet fever.

A week before her admission into the Middlesex Hospital she was attacked by very severe pain in and behind the left ear and the discharge appeared again. A swelling

now formed over the mastoid process and she became very feverish and was delirious at night. There was no vomiting.

State on admission.—Pulse 96, resp. 26, temp. 100°. Patient is a pale, rather delicate-looking little girl complaining of great pain in the left ear. The left auditory meatus is blocked by granulations and exudes foetid pus; over the left mastoid process is a tender œdematous fluctuating swelling, and on this side she cannot hear the ticking of a watch.

Pulmonary signs normal; there is a faint systolic murmur at the cardiac apex. Abdominal organs appear to be normal, urine free from albumen.

Chloroform was administered, and Mr. Gould made an incision over the mastoid process and let out about two ounces of pus. The whole mastoid process, together with the lower part of the squamous bone and the greater part of the tympanic ring, was found to be denuded, and there was a free communication between the abscess and the external meatus. A drainage-tube was passed through this, and the parts were irrigated with a carbolic lotion. The evening temp. was 103° (see Plate VII).

January 19th.—Temp. 101°; patient slept well and is free from pain, but is very irritable and cannot bear to have the ear touched. A little bloody discharge has issued from the drainage-tube. At 1 p.m. she had a severe rigor lasting ten minutes, after which the temperature rose to 104.6°.

At 3 p.m. she was again chloroformed and Mr. Gould trephined the mastoid process and with a small gouge removed some soft friable bone. She was now given ten grains of quinine, an ice bag was applied to the head, and at night a draught of bromide and chloral was administered. The next day the patient was free from pain and seemed better.

21st.—Temp. 97.8°, pulse 72; has slept well, is in no pain, no discharge from the wound. At 2.45 p.m. patient had a slight rigor lasting five minutes, after which the

temperature was 102.4° . She was given ten grains of quinine; the evening temperature was 98.6° .

During the next six days the patient seemed to be progressing favorably. She was almost free from fever, had no pain, and was able to take solid food; the wound looked healthy.

On Jan. 28th she became worse, she vomited, lost her appetite and became fretful and irritable. There was, however, no return of pain in the ear. The morning temp. was 97.6° , the evening 104° . She now felt burning hot and perspired profusely; her pulse was 150.

29th.—Has passed a restless night. To-day she is depressed and irritable. The temperature varied during the day from 97.8° to 103.8° ; there was no pain in the ear.

30th.—At 2 a.m. this morning the temperature rose to 105.8° ; ten grains of quinine were administered, and at 10 a.m. the temperature was 96.4° . Shortly after she had a severe rigor lasting ten minutes, and the temperature rose to 101.8° . She had a restless night, vomited twice, and now complains of pain on the left side of the chest. Ear is free from pain; at 10 p.m. the temperature rose to 103.2° ; ten grains of quinine were given.

31st.—Was very restless and thirsty during the night and complained of severe pain in the head. This morning feels better. At 10 a.m. the temperature was 96.4° . In the evening she had another rigor, and the temperature rose to 103.2° and she vomited.

February 1st.—Is free from pain, but seems to be getting weaker.

2nd.—Temperature at 10 a.m. 104.2° . Has an irritable cough and complains of pain on coughing in the left hypochondriac and lumbar regions, and here there is a good deal of tenderness. The breath sounds on the left side are normal; but there is some dulness on percussion and feeble breathing at the right base. Ordered ten grains of quinine every night, cod-liver oil, and two ounces of port daily.

3rd.—In the night her nose bled; continues to cough.

4th.—Complains of pain on the right side, and fine friction sounds are audible in the axillary and mammary regions. At 1 p.m. the pain became extremely acute, and a subcutaneous injection of morphia was administered.

During the next three days little change took place in her symptoms, but she continued to get weaker and to lose flesh. Friction sounds continued to be audible, and the dulness at the right base became more pronounced; moist râles and bronchophony became audible. On February 7th it was noticed that her breath was offensive and she began to spit up small quantities of offensive pus. Since the regular administration of quinine at night the temperature, as seen by the chart, has not ranged so high.

11th.—It was noticed that there were bubbling râles on coughing over the right base; the dulness now extended as high as the angle of the scapula.

On Feb. 16th she had to be placed in a room by herself in consequence of the horrible fœtor of the breath and expectoration. Patient continued to lose flesh and strength and became emaciated to an extreme degree. She was constantly hawking up with great difficulty small quantities of fœtid pus, and it was evident she must soon succumb. After consultation with Dr. Powell I determined to have an opening made into the gangrenous cavity which we believed to be present in the base of the right lung. The physical signs were now absolute dulness on percussion as high as the angle of the scapula, bronchial breathing, and coarse almost bubbling crepitation at one spot below and internal to the angle of scapula.

On Feb. 23rd chloroform was administered and Mr. Gould introduced an aspirating trocar and cannula through the eighth right interspace about an inch external to the angle of the rib in a direction upwards and inwards. On withdrawing the trocar a few drops of fœtid pus escaped, and air passed in and out with the respiratory movements. A large-sized trocar and cannula were then introduced close to and parallel with the first, which was then withdrawn, but on removing the trocar no pus or air escaped,

showing that the cavity had not been entered, though the two trocars were close together. A piece of drainage-tube was then introduced through the cannula, which was itself withdrawn over the tube. A pad of boracic lint and oakum was placed over the side. In the evening patient was in great pain, still coughing and hawking up foetid pus and perspiring profusely; pulse 136, very small and feeble; temp. 99°; given a subcutaneous injection of morphia.

24th.—Patient has passed a restless night and vomited several times. This morning a little foetid pus escapes through the drainage-tube and air passes out on expiration.

25th.—Cough is better. She has ceased to expectorate. Dressings soaked with foetid pus, and a dark stringy plug was withdrawn from the drainage-tube. This on microscopical examination was found to contain elastic fibres.

26th.—General condition improving. No expectoration. Appetite better. Dressings soaked with brownish, offensive pus.

27th.—Discharge abundant; less offensive. No expectoration. General condition continues to improve. Is very hungry, and was given at her urgent request pork chops and mashed potatoes. Breath much less offensive. Eats heartily. Discharge also less offensive.

Patient now continued steadily to improve and rapidly regained flesh.

On March 1st Mr. Gould changed the tube for a shorter one.

3rd.—The discharge was much diminished and no longer offensive; air still continued to pass in and out. To-day the tube was removed. There is still a discharge from the auditory meatus and from the wound over the mastoid process.

6th.—Patient able to get up. Appetite voracious.

8th.—Air no longer escapes through the opening. Discharge scanty and sweet.

13th.—Opening into chest is quite closed. Wound covered with healthy granulations and cicatrising at edges.

On March 27th she was sent to the Eastbourne Convalescent Hospital. The wound had nearly healed. There was impaired resonance over the right base with slight sinking in of the chest wall; the breath sounds were feeble but vesicular in character, and free from adventitious râles.

She was seen again on her return from Eastbourne and was then quite well. The wound had entirely healed.

Remarks.—In this case there can be little doubt but that the gangrene of the lung was the result of a pyæmic embolism, as the general signs of pyæmia, repeated rigors, fever of a markedly remittent type, and prostration were well marked.

The mode of treatment adopted was the only one which afforded the slightest hopes of saving the child, as she was evidently rapidly sinking from the effects of the pent-up gangrenous matter in the lung. And I believe that wherever we have to deal with a condition of this nature the case should be treated according to the well-established principles of surgery, and evacuation effected.

In 1879 I brought before the Clinical Society a case of gangrene of the lung which was treated by incision and drainage, and though here the patient was too far reduced to allow of his rallying, nevertheless the most marked relief to the distressing symptoms was obtained.

Sometimes, no doubt, a circumscribed gangrene of the lung causes but little constitutional symptoms, and the patients ultimately expectorate the contents of the gangrenous cavity and recover. But wherever the condition produces marked hectic or septicæmia, the operation should if practicable be had recourse to.

Where the pleura is adherent and the lung surrounding the gangrenous cavity solidified I believe there is no danger attending the operation. And where the gangrene is of some duration this condition is most likely to be met

with. And in all cases an exploratory puncture with a fine trocar may be made without much risk.

If there are no pleural adhesions it may perhaps be doubtful whether it would be right to incur the risk of converting the case into one of pyo-pneumothorax, though I believe even this condition would afford in many cases better chances of recovery than one of gangrenous septicaemia.

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To Illustrate Paper by Dr Cayley & Mr Pearce Gould.