them, however, the deformity has continued to progress more especially in the direction of elevation of the trochanters, which are now about half an inch above Nélaton's line, with the result that the left leg is in each case shorter than the one operated on.

3. *The Deformity on the Side Operated on has come to a Stand-still in both Cases.*—This is to me quite an unexpected result. Why it should have become arrested on the side operated on while it has progressed on the other is somewhat difficult of explanation. The trochanters on the limbs operated on still remain at the level of Nélaton's line; while, as has been said, on the other side they are half an inch at least higher. Consequently, the legs operated on are longer than the others. Two suggestions appear to me possible:

1. The process of repair and consolidation of the bone around the point of fracture may have extended upwards into the neck of the bone, and led to consolidation and arrest of the softening process, which was leading to the curvature.

2. The branches of the nutrient artery to the neck of the bone were divided in the operation, and, as a result of diminished vascularity, consolidation of the neck may have been hastened.

A CASE OF A TOOTH IMPACTED IN THE LEFT BRONCHUS: GANGRENE OF THE LEFT LUNG: DEATH.

By JAMES S. WARRACK, M.A., M.D.,
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A WOMAN, aged 26, was admitted to the Victoria Hospital, Burnley, on December 18th, and died on December 30th, 1897. She stated, on admission, that four days previously she was given gas for the purpose of having a tooth extracted. At the critical moment she appears to have taken a deep breath, the result being that the tooth, which must have escaped from the forceps, was inhaled into the air passages. Thereafter extreme cyanosis occurred, and she had a feeling of tightness in the throat, with dyspnoea, and a hard dry cough, aggravated by speaking or change of position. She had also a vague feeling of something being fixed inside the chest, but could not indicate the position. When I saw her she was lying on her back, with livid lips, and coughing in frequent paroxysms, but without expectoration. The coughing was much aggravated by attempts to speak, and by change of posture.

The left side of the chest scarcely moved at all on respiration. There were no breath sounds audible over the left side of the chest, with the exception of tubular breathing at the left apex, accompanied by small moist râles, and this was indistinct posteriorly. On the outside of the left nipple there was a small area over which a friction rub was audible. On the left side, from the level of the nipple down to an inch from the umbilicus and backwards as far as the mid-axillary line, there was a well-marked area of hyperæsthesia, which corresponded roughly to the distribution of the sixth, seventh, and eighth dorsal spinal roots. The breath sounds were harsh on the right side but otherwise normal. The pulse and respiration-rates were much quickened.

During the next few days there was little alteration in the patient's condition, but the temperature assumed the hectic type.

On December 27th, thirteen days after the accident, there were well-marked signs of gangrene of the left lung. The breath was offensive, and there was expectoration of a brown and foul-smelling sputum. The lower cervical glands on the left side were enlarged, and there was a well-marked friction rub in the left axilla. Her condition became gradually worse until death occurred on December 30th.

At the necropsy on December 31st, 1897, I explored the trachea up to the larynx, but no foreign body was found there. All over the left pleural cavity there were numerous recent adhesions, and on separating these some grumous fluid came away from the lung. The heart was flabby and rather smaller than usual, and its right side was dilated. On cutting open the left bronchus the missing tooth was found. It was very tightly wedged in the bronchus, its point being downwards and the crown upwards, so that it had

apparently acted as a "ball valve." It had almost ulcerated through the left bronchus, which above the situation of the tooth was congested and full of grumous fluid. On following the left bronchus into the lung there was found an irregular passage full of a brown foul-smelling fluid. The whole of the left lung was gangrenous and crepitating, and on squeezing the lung substance there exuded a fluid of the character described. The bronchial glands were enlarged, and there was also an enlarged gland at the root of the neck on the left side. Above the impacted tooth no bronchiole was given off, so that there must have been entire obstruction. The right lung was congested and oedematous, and showed commencing consolidation at the base. There were two cavities in the left lower jaw, and into the hinder one the tooth, which was carious, fitted exactly, its direction being forwards and inwards.

This case seems to illustrate the effects of obstruction to a bronchus, as Dr. Sevestre has recently pointed out in the *BRITISH MEDICAL JOURNAL*, the early stage being collapse of the lung, and the later, inflammation, leading sometimes to the entire disorganisation and gangrene of the lung. The tooth did not appear to have been tightly wedged in at first when the patient was seen, but seemed to have become so owing to the incessant attempts to expel the foreign body, and with each attempt the conditions must have been aggravated by the suction in during inspiration. The gangrene would be excited both by the retention of secretion, and by the introduction of septic material from the tooth.

CASE OF ACUTE TETANUS SUCCESSFULLY TREATED BY ANTITETANIN.

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G. F., a boy, aged 8, was seen by me for the first time at 10 P.M. on September 19th, 1898. He lay on his back in bed with his lower extremities rigid and fully extended, and his head, neck, and shoulders propped up with pillows. The abdomen had a flat, board-like appearance, due to contraction of all the muscles of its anterior wall. The head was somewhat retracted; he could open his mouth widely though slowly, and protrude his tongue. He had little difficulty in swallowing liquids, and could move his arms with considerable freedom. The temperature was normal and the pulse regular, with a rate of 90 beats per minute.

On inquiry, I found that the terminal phalanx of his right middle finger had been crushed in the cogwheel of a winnowing machine on August 28th. The wound had been somewhat roughly dressed, and examination showed that it was not soundly healed, the scar looking red and irritable. From the date of the injury up to September 17th—a period of nineteen days—the boy was apparently in his usual health. On that day it was noticed that he was a little stiff and awkward in his movements. On the 18th, the stiffness became more marked, and he was kept in bed.

On the 19th I was sent for. As the bowels had not acted for three days, a 2-gr. dose of calomel was given, and 10 gr. of bromide of potassium every three hours were ordered. He had a very restless night, and on the following morning more of the muscles were affected, the risus sardonicus was well marked, and the convulsive seizures were occurring with greater frequency and increased severity. Tetanus antitoxin was telegraphed for from the British Institute of Preventive Medicine, and in the evening of the same day (the 20th), chloroform having been administered, 20 c.cm. of the antitoxin were injected under the skin of the abdomen, and the terminal phalanx of the injured finger was amputated. Just before giving the chloroform he was seized every few minutes with attacks of marked opisthotonos. At 9 A.M. on the 21st, 10 c.cm. of antitoxin were injected, and again at 9 P.M. this dose was repeated. So far there was no improvement, the attacks recurring with great severity every few minutes. The tongue was badly bitten several times. He lay with his abdomen and lower extremities wholly uncovered, as the weight of the bedclothes—even of his night-shirt—was painful, and seemed to start a seizure. The next morning the attacks were less frequent, and he had snatches of sleep. A further dose of 10 c.cm. of antitoxin was injected, and this amount