and opened his eyes, which were turned to the ceiling. Prolonged suffering illness, sepsis, and repeated haemorrhages must have rendered the case particularly vulnerable, and it is doubtful under the circumstances if the cerebrum could have withstood a less protracted arrest of its circulation. As there had been a good deal of muscular tremor prior to the operation, an investigation was made after death as to the presence of tetanus, but this was excluded. The operation had not been begun at the time of the catastrophe.

CASE III.

An elderly woman in a state of collapse was undergoing operation for strangulated femoral hernia when the heart stopped beating. Cardiac massage was at once performed and spontaneous contractions occurred. As the abdomen was being closed the heart again stopped beating, and a second attempt with cardiac massage then failed. Although the patient was a poor subject, this experience seems to indicate that massage should be carried on until contractions are established at maximal strength, the task not being considered complete merely upon their reappearance.

CASE IV.

In this case general adhesions were found in the upper abdomen, and it was not possible to insert the hand below the diaphragm or below the liver. Pressure below the stomach immediately forced gastric contents out of the mouth. Methods 2, 3, or 4 were indicated but not tried.

CASE V.

On February 7th, 1918, a case of perforated gastric ulcer in a man aged 38 years came under my care. The operation was performed fourteen hours after perforation, and the abdomen was found full of gastric contents. There was a large opening in an indurated ulcer at the lesser curvature of the stomach. It was impracticable to treat this otherwise than by passing a tube to the opening. Suprapubic and loin drainage was provided. Whilst the wound was being sewn up the patient expired. Cardiac massage was unsuccessful. Success was not to be anticipated, as the subject was devitalized.

CASE VI.

On June 13th, 1917, a glass cutter, aged 43 years, was struck on the left leg during an air raid. Severe bleeding, which preceded admission, continued from two deep contused wounds. There was tearing of muscle and comminuted fracture of tibia and fibula at their upper third. The patient was restless and anxious, and had no feeling in the toes. Operation was performed, shrapnel being removed and the punctured anterior tibial artery ligated. Gangrene appeared on the second day and amputation was performed at the middle of the thigh, the flaps appearing suspicious. The patient sank during the operation, pulse and respiration ceasing. All methods to revive him, including cardiac massage, failed, as was to be expected in such a case of toxæmia.

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HEAD OF RYE GRASS IN THE LUNG REMOVED FROM PLEURA.

BY

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THE following is a case in which an ear of rye grass (*Lolium perenne*) was inhaled, and after producing symptoms of an unusual character was extracted from the pleura.

Children, in this part of the country at least, play games with ears of rye grass. If one of the ears is placed on the back of the neck, bristles upwards, it gradually disappears down the back. Another game is to throw the grass at one another, the sharp bristles readily adhering to the hair or clothing. A third, and more dangerous game, is to place the grass on the tongue, when it slowly creeps backwards towards the throat.

The patient in this case, a boy aged 14 years, having put an ear of rye grass into his mouth, felt it pass into the throat, and was aware of a strong prickling sensation in the pharynx. The prickling suddenly disappeared after some hours. As there was no coughing or disturbance of any kind it was assumed that the grass had been swallowed.

Twenty hours later he was seized with acute pain in the right side of the chest in the area corresponding to the lower lobe of the lung, and was forced to go to bed. The pain continued, and remained severe up to about sixty hours from the onset, and then abated. His medical attendant was called seventy-two hours after the swallowing of the grass. At this time the physical signs suggested consolidation of the lower lobe, and with free fluid in the pleural cavity at the level of the limit of the lower lobe. There was no cough and no sputum and the picture was one of a pleuro-pneumonia with the pleural element predominating. The temperature was 104°, and kept steadily

on this line up to admission to hospital, eleven days after it reached this level. The fluid in the chest increased until the whole right pleural cavity was filled. Only on the eleventh day was a little blood and a few spots of very foul pus brought up by coughing. Exploration of the chest proved the fluid to be very foul pus, and he was referred to me for the drainage of an empyema.

On admission his general condition was very grave, with great dyspnoea and much toxic absorption. Resecting the ninth rib in the scapula line, I evacuated about three pints of very foul pus. At the end, a complete ear of rye grass was floated out of the pleural cavity, covered with debris. No cavity could be felt in the lower lobe of the lung. Continuous drainage and lavage by Dakin's solution through a Dobson's cannula completed the operation.

On the eighth day a large slough of lung tissue was extruded from the pleural cavity, followed in two days by a similar one, at least three inches long and a quarter to half an inch thick.

The boy is making an excellent recovery. There is practically no sputum, and very little cough to be noted.

On direct examination of smears from the pus, large numbers of bacilli, Gram-positive and negative, were found, together with staphylococci and streptococci. Cultures were all overgrown with saprophytic organisms. No branching fungi of the actinomycosis order were discovered.

The following points in this case are of interest:

1. Its rarity in view of the fact that the games mentioned, especially that concerning the tongue, are so common.

2. The inhalation of the grass with the absence of the usual intense paroxysm of coughing.

3. The entire lack of cough and sputum for eleven days.

4. The rapidity of involvement of the pleura, which is almost suggestive that the ear of rye grass "forcibly crept" its way through the lung tissue and involved the pleura at so early a date that the damaged lung tissue and consequent abscess drained into the pleural cavity instead of being expectorated by way of the bronchus.

INTRANASAL DACRYOCYSTOSTOMY.*

BY

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IN summarizing the history of the various plans which have been adopted for making a permanent opening from the lacrymal excretory system into the nasal cavity, the earlier efforts may be neglected. These were designed to provide a new outlet from the nasal duct, but experience has proved that the lesion to be circumvented is rarely, if ever, situated so low down that such methods could succeed. The abnormality, usually a stenosis, is practically never at a lower horizontal level than the junction of the lacrymal sac and the nasal duct. The sac, not the nasal duct, must be attacked; to open the duct only is useless.

The first reported case of such a sac operation was that of Strazza in 1903. The technique adopted by different surgeons has varied. Yankauer's operation may be described as a plastic reconstruction of the nasal duct right up to the sac, and so approximates to the principle of an attack directed on the sac itself. Mosher removes the anterior end of the middle turbinate, and then approaches the sac via the unciform process. Beck devised two operations, in one of which he opened the sac into the nose by means of a burr introduced through a canaliculus. Von Eicken works from the antrum; but, as West remarks, only the nasal duct is accessible, and, in order to expose the sac from the antrum, a piece of the orbital floor must be removed. Choronshtzky, Wiener and Sauer force a probe through canaliculus and sac into the nose, and then remove, with the probe as guide, the debris of bone and mucosa; it will be noted that these surgeons do not undertake any formal preliminary removal of bone and mucosa so as to make a window. West, Halle and Polyak perform a formal window operation intranasally, then seize the sac and deal with it by partial excision. Of these window operations West's may be regarded as the prototype.

Broadly speaking, and apart from combined operations in which the sac is approached from both inside and outside, all intranasal manoeuvres for draining the lacrymal sac fall into one of three types.

The first is the most ambitious undertaking, in that it aims at reconstructing the lumen of the nasal duct right up into the sac. This form of operation, of which Yankauer's is the only instance, is not generally favoured. It is technically difficult of performance, and in any case is likely to fall short of its object because the lesion may

* A summary of a paper read at the Annual Summer Congress of the Laryngological Section, Royal Society of Medicine.