following morning for a similar purpose, and to excise the wound by removing the skin and subcutaneous tissue, the wound being swabbed with antitetanic serum and undiluted chloramine. The cerebro-spinal fluid which was withdrawn showed a few polymorphonuclear leucocytes, but no organisms were found in films or on culture. This reaction was ascribed to the serum given the day previously. The fluid withdrawn on this day failed to give tetanus to a mouse inoculated with it, so that presumably any toxin was by now neutralized.

Treatment given.	Day of Disease.	Intra-thecal.	Intra-venous.	Intra-muscular.	Sub-cutaneous.
August 31st	20th	1,200	10,000	3,000	—
September 1st	21st	1,500	6,000	—	2,000
September 2nd	22nd	—	10,000	—	—
September 3rd	23rd	—	10,000	—	—
September 4th	24th	—	9,500	—	500*
September 5th	25th	—	9,500	—	500*
September 6th	26th	—	Serum stopped	—	—

* Desensitizing dose.

Restlessness and vomiting came on after the anaesthetic on August 31st (twentieth day), possibly post-anaesthetic; this continued till the twenty-second day, during which he was still restless, but the vomiting ceased in the morning. The pulse rate was now very slow but regular: in the morning of this day 52 was the lowest rate.

From the thirteenth day to the twenty-fourth day of the disease chewing was practically impossible, and fluid nourishment only was attempted to be given by the mouth. From the twentieth day to the twenty-third day vomiting was almost incessant, and liquids, such as grape juice and lime water, were not retained completely.

Medicinal Treatment.—Calomel 1/10 grain was given at intervals on the night of September 1st (2 grains in all), but some of this was vomited. To overcome the restlessness on the night of September 3rd an enema containing 15 grains of chloral hydrate and 1/2 drachm of sodium bicarbonate in 4 ounces of water was given; this was retained and he passed a good night. A mixture of chloral hydrate and potassium bromide (5 grains of each) was given subsequently for two days, three times a day. He settled down well after this, and from this time his convalescence became assured.

On the twenty-fifth day of the disease the patient began to masticate his food fairly freely; he became more restful, and the tonic spasm of his masseters and abdominal muscles practically disappeared. Convalescence now became assured, and within five weeks the patient was able to return to school. At this time all symptoms had disappeared; the mouth could be opened widely and the natural facial expression was present. The knee-jerks alone showed slightly increased activity.

This case of tetanus, in which well marked spasms of the masseters and abdominal muscles were associated with persistent vomiting, was cured by repeated doses of serum given chiefly intravenously and intrathecally. To accomplish this nearly 100,000 units of antitetanic serum had to be administered before the symptoms were finally subdued.

FOREIGN BODY IN THE OESOPHAGUS: DIFFICULT REMOVAL.

BY

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THE chief reason for placing the following case on record is the difficulty experienced in exactly locating the swallowed toothplate, in spite of the fact that a radiograph distinctly showed its presence, and also in removing it.

A woman, aged 64, was admitted to the Manchester Royal Infirmary on March 5th, 1927, with the following history. Fourteen weeks previously she had swallowed a portion of a dental plate; since that time she had been an inmate of another institution, where on two occasions oesophagoscopy had been performed, without, however, revealing the foreign body. A bougie had also been passed and met with no obstruction; a radiograph had not shown very definitely whether the toothplate was present or not.

A radiograph taken the day after admission to the Infirmary showed the toothplate very clearly at about the level of the sternal notch. Oesophagoscopy under local anaesthesia failed to reveal the plate, but a mass of granulation tissue at the level of the sternal notch was seen, from which haemorrhage was brisk enough to prevent further examination. Five days later, under local anaesthesia, the oesophagoscope was very cautiously passed again; the plate was felt in the granulations and was removed from their lower end with forceps. On attempting to remove the plate from its new position it was found to be too large to pass the site of the granulations; it was therefore released in order that an effort might be made to so place it that its narrowest width was crosswise. In attempting this the plate slipped downwards and was not seen again owing to the blood which was coursing freely from the granular area.

Toothplate: Half scale.

The patient was given a week's rest and the tube was again passed, a radiograph having shown the plate to be now about two inches above the diaphragm. To the surprise of the operator no foreign body could be seen, although a radiograph taken soon afterwards showed the foreign body still in the same place. After a further week's rest, under general anaesthesia a further examination was made, and again ended in failure.

It was now determined to try retrograde oesophagoscopy. One week later, therefore, the patient, having swallowed a length of silk, a gastrostomy was performed by Mr. Bryce, the silk thread brought out, the oesophagoscope passed on it to the cardia and a little over two inches up the oesophagus, when the plate was seen and removed at once without any difficulty.

The gastrostomy wound was kept open for ten days for the purpose of feeding and for giving rest to the oesophagus. The patient was now able to swallow any kind of food, and had apparently made a complete recovery. Whether the contraction of the granular area will bring about a stricture the future will show.

The case must be regarded as a relative failure because the foreign body was not removed *per vias naturales*, for it would be supposed that anything which had got into the gullet from above could also be removed from above. I cannot condemn too strongly the use of the bougie. In the case of an irregularly shaped foreign body it may easily drive the same into the oesophageal wall and cause impaction, or even perforation. The bougie should only be used under inspection with the oesophagoscope, and then only for treatment of strictures, not of foreign bodies.

The failure to find the plate on the third and fourth examinations was due to the facts that its thin upper border fitted closely the posterior oesophageal wall, that its colour was exactly that of the gullet, and that possibly a fold may also have obscured things.

The silk thread was used to guide the oesophagoscope quickly, because sometimes it is not easy to find the cardiac opening from below.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

ACUTE INTESTINAL OBSTRUCTION BY BANDS IN CHILDREN.

Two cases of acute intestinal obstruction in children were admitted to the Worthing Hospital under my care, the one in December, 1922, and the other in June, 1927. Both cases were sent in by Dr. Thompson of Lancing, with the diagnosis of acute appendicitis, and in each case I operated through a gridiron incision, expecting to find an acutely inflamed appendix. In both patients physical signs predominated in the right iliac fossa, for reasons which will be obvious when the findings at operation are read.

Both patients recovered. The condition of Case I was dangerous for some twenty-one days after resection at primary operation, owing to broncho-pneumonia, and his stay in hospital was more than three months. Case II spent only fourteen days in hospital.

CASE I.

A boy, aged 8 years, admitted on December 7th, 1922, had abdominal pain (umbilical and hypogastric) for two days. The child was obviously ill. There was general rigidity of the