Ainhum is a disease of some years' duration, and is seldom seen in hospital early in its history, as patients do not apply for treatment until inconvenienced by the toe; this inconvenience arises from the attenuated pedicle being unable to support the toe, which consequently bends when taken off the ground, and is caught under the foot in walking, occasioning considerable pain, particularly in those cases where the ulcer is present. The duration of the disease has been given at from one to fifteen years; the former time is probably much too short. The disease causes no constitutional disturbance, and is looked on by the natives as such a slight ailment, that they will themselves perform amputation if the toe troubles them. When total spontaneous amputation occurs, the small wound left heals rapidly and naturally, leaving no remarkable appearance in the cicatrix.

RESECTION OF CARCINOMATOUS BOWEL PER RECTUM.

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Mrs. A., aged 44, was sent to me by Dr. Goodworth, of Winterton. For four days she had had acute abdominal pain, tympanites, vomiting, constipation, and tenesmus, with escape of blood and mucus. Two inches inside the anus the apex of an intussusception was felt, with a mass of epithelioma involving two-thirds of the circumference of the bowel, and extending upwards for nearly 2 inches. She was sent into the Hull Royal Infirmary, and after consultation with my colleagues I decided to remove the growth and reduce the intussusception. Previous to the operation there was hardness of the muscles over the left iliac fossa and a quick thready pulse.

Under ether the intussusception was found to be about 5 inches long. The long tube was passed into the lumen for about 6 inches without finding any obstruction. The mass of bowel and growth was readily extracted from the anus, and the left forefinger was passed into the lumen of the intussusception. With a curved needle nine silk sutures were passed through the two layers of bowel wall from the outer mucous lining into the lumen, then to the outside again in the direction of the circumference, each suture overlapping the previous one for $\frac{1}{4}$ inch. A ring was thus formed, causing firm apposition of the serous surfaces 1 inch above the margin of the growth. The mass was then removed $\frac{3}{4}$ inch below the ring of sutures. On being returned into the rectum the intussusception rapidly receded out of reach.

Twenty-six hours after the operation, as the symptoms had not been relieved and no flatus or motion had been passed, ether was again given, and the abdomen opened over the sigmoid flexure. Gas escaped on opening the peritoneum, and pus welled up from the iliac fossa. The small intestines were distended, matted together, and firmly adherent over the sigmoid flexure, which could not be exposed. The wound was irrigated with boric acid solution, a Keith's tube put into the iliac fossa, and an artificial anus was made in the most prominent coil of the small intestine. The patient did not rally, but died in twelve hours.

Post-mortem Examination.—At the site of the resection the peritoneal surfaces were in close contact and there was no sign of inflammation. The bowel above was plugged with solid faeces for 6 inches; there was a collection of pus in the left iliac fossa, and the adjacent bowel was covered with tough lymph. The small intestines were firmly matted. No perforation was discoverable in the region of the sigmoid flexure. The artificial anus was found to be about the middle of the small intestine.

REMARKS.—The toughness of the adhesions and the amount of pus showed that the peritonitis was of at least three days' duration. The absence of inflammation at the site of resection negatives the idea of extravasation at the time of operation. If the peritonitis had not previously existed, I see no reason why this method of operating should not have been successful.

REPORTS TO THE SCIENTIFIC GRANTS COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION.

REPORT ON THE ACTION OF PANCREATIC AND RENNET EXTRACTS ON CASEIN.

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It has been a matter of occasional observation that milk will undergo clotting under the influence of pancreatic extracts. Besides this change, visible to the naked eye, Roberts has pointed out that though no actual clotting may occur, yet the casein in milk may undergo such an alteration by the action of pancreatic extracts that boiling will cause a curdling of the milk. Roberts applied to the casein when it had undergone this change the term metacasein. The experiments I have made indicate more clearly, perhaps, what this change is.

The existence of the metacasein was shown by Roberts to be merely transient. After the digestion of the milk with pancreatic extracts had lasted for a certain time, boiling a sample of the digesting mixture resulted in the formation of a few flocculi of heat-coagulated material. Later, this formation of coagulum became more marked, and after reaching a maximum gradually lessened till, finally, boiling produced no apparent result.

My earlier experiments were directed at ascertaining whether this metacasein was to be regarded as simple casein precipitated by the combined effect of heat and free fatty acid formed by the fat-splitting ferment of pancreatic extracts. I was able, however, to obtain specimens of pancreatic extracts which had lost their ptyolytic properties (the ferment determining these properties being, as pointed out by Grützner, by no means durable), and milk when treated with this form of extract caused the characteristic change to occur. I was able to ascertain that neither before nor after boiling was there any alteration of reaction in milk, alkaline at the commencement of the experiment. Since, moreover, pancreatic extracts lost their power if subjected to heat, it appears that the result was due to some ferment of the pancreas. Certain influences affect this change in the casein, most important being the presence of neutral salts. A small quantity of sodium chloride added to milk will considerably hasten the appearance of the metacasein reaction. Free acids and alkalis appear to have very much the same effect upon the ferment determining this change as upon the proteolytic ferment.

I next attempted to ascertain what relation there was between this metacasein-forming ferment and the pancreatic rennet ferment that has been previously described. It was first necessary to obtain some more exact information upon this latter ferment. Not every specimen of pancreatic extract will produce clotting of milk, and it was first necessary to see what circumstances determined the action. I found first that, taking a specimen of pancreatic extract which caused clotting when added in definite proportion, if this were added in too large an amount, no clotting occurred. Such clots as do occur become later perfectly liquid. If the milk be but slightly diluted, the probabilities of a clot occurring are much decreased. It has been pointed out that brine extracts are very much more potent in causing a clotting than are most other forms. This is simply the effect of the concomitant addition, with the extract, of neutral salt. If to specimens of milk, not clotting by the action of extract, sodium chloride be added to bring the total percentage of the liquid up to 5 per cent., clotting will occur under the influence of the extract, unless this be extremely weak. This result cannot be explained by the supposition that really the proteolytic ferment is being retarded, and therefore the rennet ferment has freer scope, since up to this percentage sodium chloride has an accelerating power upon the proteolytic action of pan-