time are—first, the increase of flow of bile and bile pigments which occurs during active digestion; and, secondly, the presence of many morphological changes in plasma, and red corpuscles within the spleen, which, according to my observations, are to be found in such great abundance in the spleen during digestion, while comparatively few in number in the spleen of the starving animal. The activity of the cells of spleen and gastro-intestinal tract is evidenced in other ways, amongst others, by the increase in the number of leucocytes in the blood during digestion, and by the accompanying increased excretion of uric acid (Pohl, Horbaczewski); by the increased tendency of the portal blood to coagulate at this period (Wooldridge, Wright).

ACTION OF CHOLAGOGUES.

Dr. Hunter drew some practical conclusions from the foregoing results:

Within the limits of health, next to digestion, the greatest hæmolytic took place, he concluded, under the action of "cholagogue" agents, such as mercury, podophyllin, iridin, euonymin, and a large series of others, with whose action we had become acquainted through Professor Rutherford's extensive researches.

The action of these so-called "hepatic stimulants" was evidenced chiefly by an increased flow of bile and an increased formation of bile pigments. So obvious was this action that they were spoken of as stimulants of bile secretion, and credited with exerting a special stimulating action on the liver, and in all probability rightly so.

The foregoing observations showed that such an increased formation of bile pigments must necessarily have been preceded by an increased destruction of blood. On the view that the liver had as much to do with this change in the blood as it had to do with the formation and excretion of bile, it was natural to ascribe the action of cholagogues to their action on the liver.

Since, however, according to his observations, destruction of blood occurred chiefly outside the liver and was effected mainly by the lymphoid cells of spleen and gastro-intestinal mucosa, he concluded that certainly the initial, if not the chief, action of such agents was not on the liver as hitherto supposed, but on those other cells, by whose activity the preceding changes in the blood were determined; and that the rôle of the liver was to excrete the products so formed. This view by no means excluded the one that these agents also influenced the activity of the liver cells. On the contrary, such was probably the case, since, as he found, for similar substances, the bile was one of the channels by which they or their remains were excreted from the body.

What he concluded, however, was that this action on the liver cell did not account for everything; that it did not account for the chief change, namely, the preceding hæmolytic, but that, to be effective at all, the cholagogues must first act on the blood through the intermediation of the lymphoid cells of spleen and gastro-intestinal mucosa.

INTUSSUSCEPTION OF THE SIGMOID FLEXURE OF THE COLON COMPLETELY REMOVED THROUGH THE ANUS.

By ARTHUR E. BARKER, F.R.C.S.,

Professor of Clinical Surgery at University College, and Surgeon to University College Hospital.

THE following is the second case in which it has fallen to my lot to cut away bodily an intussusception of the lower bowel with a malignant growth from the anus, and in both instances with entire success. In the first, operated on June 9th, 1886, I dealt with the mass exactly as in the case described below, and the patient was alive and well when I inquired about her quite recently of her medical attendant, Mr. Theo. Hoskin, of Hackney Downs. In a short paper read before the Royal Medical and Chirurgical Society on May 18th, 1887, I narrated this case, and made it the text for a summary of the subject of intussusception of the lower bowel. The rarity of the condition is there pointed out, and the recorded cases, very few in number, in which the mass has been bodily excised are given. The present

case is now added to the list as showing how satisfactorily the condition may be dealt with from the anus, and as suggesting whether we might not deal more boldly with intussusceptions of higher portions of the intestine when they present in the rectum by cutting them completely away and suturing them, as in the present instance, after drawing them down. Of course, this has been done, but perhaps not so hopefully as cases like the two referred to would seem to justify.

E. W., aged 56, a fairly healthy woman, was admitted into University College Hospital on August 15th, 1891, for obstruction of the bowels. She stated that two years and a-half before for two consecutive mornings she passed about half a pint of blood independently of any motions. About fourteen days before admission she first noticed pain about the anus, which was aggravated after taking solid food. Since then she had been suffering from tenesmus, and passing blood quite independently of any desire to pass a motion. She had also suffered from constipation and nausea, but no vomiting, for a fortnight.

On admission the patient looked fairly well. The pulse was 80. The abdomen was full and prominent, and only slightly tender. The outlines of the intestines could be indistinctly seen, especially in the two flanks and iliac fossae, but everywhere the abdomen was resonant. There was a discharge of blood mixed with mucus from the anus. About two inches within the anus a mass projecting into the lumen of the bowel was to be felt with the finger. This mass presented a hard, nodular, irregular ring to the finger, which could be passed into the centre as into a ragged os uteri, and round the mass externally. The mucous membrane above the hard ring was apparently healthy everywhere.

Regarding the case as one of intussusception of the sigmoid flexure of the colon due to constriction of a malignant growth, I proceeded as follows. I first stretched the anus widely with the fingers until it was quite lax. The intussusception could then be drawn down until it projected four or five inches below the anus. A large silver tube was then passed up the central lumen about six inches to relieve the abdominal distension, and gave exit to a large amount of gas. Then grasping the mass with the index finger passed up the lumen of the bowel and the thumb externally, I passed a stout silk stitch from without inwards, and then from within outwards through all the coats of the intussusception, about one inch above the upper margin of the growth, and tied it tightly. Below this the bowel was divided transversely for a short distance. Between the serous surfaces there was no adhesion, and some glandulæ epiploicæ projected. Then a second stitch was similarly inserted to one side of the first, it being quite clear that no small intestine was seated between the serous surfaces. Then a second transverse cut was made below the second stitch. Then a third stitch and cut were made, each time the wound being examined for possible protrusion of small bowel. In this way a circle of stitches was gradually inserted all round the bowel, about an inch above the limit of the growth, and all the intussusception below the ring of suture was gradually cut away. Previous to suture and section the whole bowel and its surroundings had been cleansed thoroughly with warm sterilised water. No faeces escaped during the operation, and at the termination of the operation a morphine suppository was inserted in the upper part of the bowel.

The mass removed weighed 1½ oz. It extended round three-fourths of the circumference of the bowel, and upwards at one point for an inch and a quarter. It was moderately firm in consistence, and papillomatous on the surface. The lumen of the bowel was so narrowed by this growth as only to admit the tip of the little finger. The bowel was cut across half an inch above the highest portion of the growth. There was no adhesion between the peritoneal surfaces of the intussusception, but the serous coat was puckered by the growth, and this shrinking prevented the reduction of the intussusception. There were a number of glandulæ epiploicæ between the serous surfaces of the part removed. Under the microscope the growth was found to be a columnar epithelioma.

The patient's condition during convalescence was very satisfactory. For the first few days she complained of some soreness in the left iliac fossa, with some tenderness on pressure, but nothing severe. Flatus was passed freely from the first day. There was considerable discharge from the bowel during the first two days. Of course the sphincter ani was paralysed for a time by the stretching, and did not retain the mucus of the bowel. The bowels were moved twice on the fourth day, and on the fifth day all pain was gone. The bowels acted daily after this, and the further convalescence was uninterrupted. A gland which had been felt just outside the iliac vessels on the right side freely movable could be felt as before when the patient was discharged from hospital on the eighteenth day quite well. The highest temperature recorded was on the day after operation, when it rose to 100.8°. She was seen some time later in the street looking perfectly healthy.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently passed away are Dr. Lestyr, of Morlaix, in France, who has left 600,000 francs (£24,000) for local charitable purposes; Dr. Cesare Schina, of Turin, Medical Inspector of Railways in Italy and Physician to the Italian Royal Family.