cortical mastoid operation, which should be performed without delay, as it offers the only chance of healing of the drum-membrane and restoration of good or perfect hearing.

Persistent otorrhoea may be caused by an untreated neighbouring infected area, such as an antral empyema, infected adenoids or tonsils, or bad teeth. These must be sought, and if found eradicated.

Very rarely indeed, tuberculosis affects the middle-ear and leads to persistent discharge.

Chronic Otorrhoea.

In a great number of cases, the institution of rational methods of treatment will have most dramatically favourable results.

It may, however, be impossible to promise a dry

ear for this reason. There may be a large perforation which can never heal, much of the drum-membrane having been destroyed. In such a case we are really dealing with a fistula, connecting the nasopharynx with the exterior, and it is obvious that a fistula leading to a cavity secreting mucus cannot be dry. If we can ensure that the discharge is one of mucus only, we must be content. If the discharge continue purulent and offensive, then we are dealing with an infection that involves not only mucous membrane, but also bone.

A radical mastoid operation will be indicated if the continued purulent discharge indicates a dangerous osteitis. The operation will have as its primary aim the eradication of bone disease that endangers life, and it is important to realise that it is not performed in order to terminate aural discharge.

MICROCRYSTALLINE SULPHATHIAZOLE IN ABDOMINAL SURGERY

A PRELIMINARY REPORT

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In 1942, L. A. Chambers, of Philadelphia, and his colleagues¹ reported favourable results with the local use of 20 per cent microcrystalline suspension in 19 abdominal cases (2 exploratory laparotomies, 1 enterostomy, 3 gastric resections, 7 operations for carcinoma of the large bowel or rectum, 1 acute pancreatitis, 4 acute appendicitis, 1 intestinal fistula). They were particularly impressed by the fact that this suspension had very little tendency to "cake" or form insoluble masses in the peritoneal cavity.

Two years later J. T. Chesterman,² of Sheffield, compared the mortality-rate in patients with acute appendicitis and acute diffuse peritonitis treated with 15 per cent microcrystalline sulphathiazole suspension (introduced into the peritoneal cavity) with that in similar patients in whom no sulphonamide drugs were administered. In the first series there was 1 death among 20 patients, or 5 per cent mortality; in the second there were 15 deaths among 75 cases, or 20 per cent mortality. Chesterman regards intraperitoneal microcrystalline sulphathiazole as of value in the treatment of diffuse peritonitis, though he admits that some of the bacteria causing this condition are sulphonamide-resistant. It is of interest to note that there was

no evidence of "caking" in the one abdomen which was reopened on the 128th post-operative day.

My series of 9 abdominal cases here tabulated is a small one and may thus be open to criticism, but it presents several valuable features justifying the publication of a preliminary report. As the result of my initial trials I am convinced that microcrystalline sulphathiazole in suspension form is extremely useful in the prevention and treatment of intraperitoneal infections. Furthermore, the dispensing with drainage in local peritonitis and even abscess formation is a great advantage in acute abdominal surgery. An effective local concentration of sulphathiazole is more easily obtained with this fluid preparation than with dry powder.

Of my 9 cases, 4 were acute perforated appendicitis, 1 appendix abscess, 1 purulent cholecystitis, 1 perinephric abscess and tuberculous kidney, 1 intussusception, and 1 acute ileal mesenteric adenitis. The operative findings and the results obtained are given in the accompanying table.

REFERENCES

1. CHAMBERS, L. A., *et al.* (1942), *J. Amer. Med. Ass.*, **119**, 324.
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No.	Sex	Age	Clinical Diagnosis	Operative Findings	Operation	Mode of Application	Amount	Culture of Pus	Result
1.	F.	63	Cholecystitis—resolving	Purulent cholecystitis—gall bladder very adherent and thick walled and contained large mixed stone, blocking cystic duct	Cholecystectomy	Intraperitoneal and wound	25 c.c.	<i>B. coli</i>	Satisfactory—primary healing
2.	M.	51	Acute appendicitis	Acute perforated appendicitis with local peritonitis	Appendicectomy No drainage	do.	25 c.c.	<i>B. coli</i>	Satisfactory—primary healing
3.	M.	63	do.	Acute perforated appendicitis with local peritonitis	Appendicectomy No drainage	do.	25 c.c.	<i>B. coli</i>	Satisfactory—primary healing
4.	M.	39	do.	Acute perforated appendicitis with abscess formation	Appendicectomy No drainage	do.	25 c.c.	Non-haemolytic streps. and a few <i>B. coli</i>	Mild wound infection only—otherwise satisfactory
5.	M.	22	do.	Acute perforated appendicitis with abscess formation	Appendicectomy Drainage	do.	25 c.c.	<i>B. coli</i>	Developed pelvic abscess which resolved without surgical treatment
6.	F.	55	Appendix abscess	Old appendix abscess—dense adhesions with residual pocket of pus	Appendicectomy No drainage	do.	25 c.c.	Sterile	Satisfactory—primary healing
7.	F.	39	Old perinephric abscess and T.B. kidney	Old adherent T.B. kidney with sinus into loin	Trans-peritoneal nephrectomy with closure—drainage of sinus in loin	do.	50 c.c.	<i>Staph. aureus</i>	Satisfactory progress—did not develop peritonitis
8.	F.	8	Acute appendicitis	Acute ileal mesenteric adenitis with breaking down of gland and abscess formation	Pus and debris removed from abscess—appendicectomy also performed. Closure	Intraperitoneal	25 c.c.	<i>B. proteus</i> and <i>Strep. faecalis</i>	Satisfactory—primary healing
9.	F.	54	Intussusception	Spontaneously reduced intussusception with inflammatory changes present—due to polyp in terminal ileum	Partial rt. hemicolectomy with end to side anastomosis	do.	50 c.c.	<i>B. coli</i>	In spite of soiling of peritoneal cavity at time of anastomosis primary healing secured. Later developed subphrenic abscess Rt. postero-superior space—treated by drainage