MATERIAL AND METHODS

This study was carried out in M.L.E. Medical College Hospital, Jhansi from July, 1987 to August, 1988. It includes cases of infective peritonitis admitted in the indoor surgical wards of M.L.E. Medical College Hospital, Jhansi. Infective peritonitis was diagnosed on the basis of clinical features, radiological examination and per-operative findings. In all the cases detailed clinical history was taken and the cases were urgently investigated, whenever possible.

Selection of patients

The patients were studied in two groups -

Group I - Control group (Laparotomy without continuous peritoneal antibiotic lavage).

Group II - Study group (Laparotomy with continuous peritoneal antibiotic lavage).

Cases were so selected that every alternate case was treated with peritoneal lavage thus avoiding any discrimination.

Group I - Control group

These cases of infective peritonitis were treated in the conventional manner i.e. supportive fluid therapy, antibiotics, electrolyte therapy and supportive drugs but
no post operative lavage was done. The source of contamination in the form of perforation etc. was dealt with as in the other group. The peritoneum was cleaned mechanically to remove all pus and debris before closure of the abdomen. Only saline was used in this procedure.

**Group II - Study group**

The patients in this group were treated in the conventional manner, that is, supportive fluid and electrolyte therapy, antibiotics, supportive drugs. The cause of peritonitis for example, perforation, gangrene or anastomotic breakdown was dealt with accordingly.

The peritoneal cavity was cleaned mechanically and with repeated saline washings. Adhesions were broken down so as to eliminate all hiding places for bacteria and to ensure that the whole of the peritoneal cavity is bathed with the lavage fluid. The final peroperative lavage was done with normal saline containing the same antibiotic combination which was to be used in the post operative lavage.

Now two large drainage tubes were inserted in the peritoneal cavity, one placed in the hepatorenal pouch and the second in the pelvis. The abdomen was closed thereafter.

After the operation continuous peritoneal lavage was started. Normal saline solution mixed with one of these antibiotics combinations was run in the doses as enumerated below.
Six pints of normal saline was run for the first 24 hours following operation through the drainage tube placed in the hepatorenal areas.

The lavage solution was run simultaneously through this tube and drained via the tube in the pelvis into a sterile bag. Normal saline solution was run into the peritoneal cavity by using sterile tubings.

The lavage was stopped after 24 hours. The drainage tubes were left in situ for 24-48 hours. A large asepto syringe after creating negative pressure was connected to the tubes alternatively so as to suck out the excessive fluid. The drainage tubes were removed after no significant seakage resulted.

The two antibiotic combinations used were —

1) C. Penicillin, and metronidazole.
2) Streptopenicillin and metronidazole.

Dosage were —

C. Penicillin — 10,000,000/500 ml.
Streptomycin — 200 mg/500 ml.
Metronidazole — 1000 mg in 24 hours.
Procaine penicillin — 400,000 units/500 ml.

The antibiotic combinations used parenterally in dosage as escalated according to body weight were Ampicillin, Gentamycin, Chloramphenicol & Metronidazole in different combinations, as was necessary.
Alternatively rubber tubes (Malcot catheter) can be used as drainage tubes after making 2-3 holes, so as to ensure adequate drainage. The catheter placed in the pelvis was of a bigger size.

The study dates from July 1967 to August 1968 and is carried out to -

i) Evaluate the utility of continuous peritoneal lavage in reduction of morbidity and mortality in infective peritonitis.

ii) Find out a suitable antibiotic combination for continuous peritoneal lavage.

iii) To note complications of continuous peritoneal antibiotics lavage, if any.
PROFORMA

Name of the patient
Age/Sex
Ward/Bed
Surgeon Incharge
Date of admission
Date of operation
Date of discharge
Result

History

1. Present illness with emphasis on the source of infection:
   - Following surgery
   - Accidental
   - Following instrumentation

2. Past, family and personal history

3. Dietetic history

Physical Examination

A. General
   CC
   Pulse
   Temperature
   Anemia
   B.P.
   Jaundice
   Cynosis
   Odema
   Lymphnodes
   Dehydration
   Clubbing

B. Systemic Examination
   C.V.S.
   C.N.S.
   Respiratory system
   Abdomen

Provisional diagnosis

Investigations

2. Urine, Albumin, Sugar, Microscopic

3. Specific, (where required)
   - Blood Sugar
   - Blood urea
   - Smear examination of pus/discharge
   - Plain x-ray abdomen in erect posture.
   - Operative culture swab.
   - Post lavage culture swab.

Operation

- Laparotomy with or without post operative lavage
- Only drainage of peritoneal cavity plus lavage.

Antibiotic combination

1) C. Penicillin and metronidazole
2) Streptopenicillin and metronidazole

Post operative progress

1) Range of temperature
2) Return of intestinal peristalsis
3) Complications if any
   a. Stitch abscess
   b. Partial wound dehiscence
   c. Complete wound dehiscence
   d. Faecal fistula
   e. Residual abscess.
Diagram showing the two drainage tubes placed in hepato-renal and pelvic areas.