

Epidemiology and Management of Peritonitis at a Rural Hospital in Zambia

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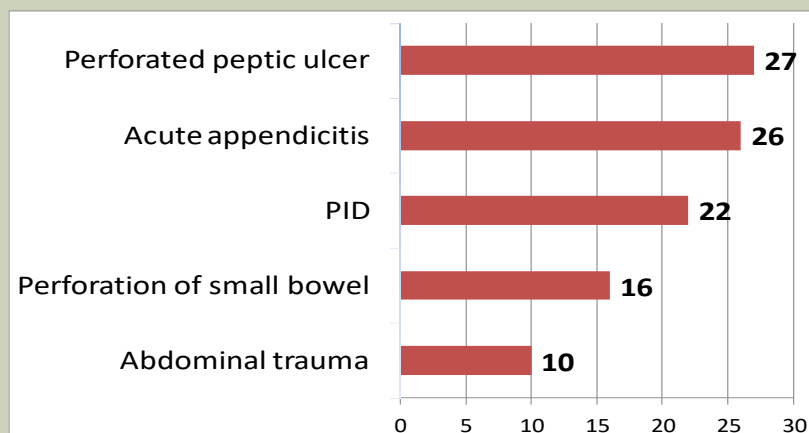
Summary

- 119 patients with peritonitis operated at a rural hospital over a 10-year period included
- Common sources of peritonitis were perforated peptic ulcer, acute appendicitis, pelvic inflammatory disease (PID), and perforated terminal ileum
- Postoperative period complicated in 42 patients (32.3%)
- 14 patients (11.8%) died postoperatively
- Organ failure was associated with increased risk of death
- Individual approach with identifying organ failure is essential to determine the patient's prognosis and decide on the level of care.
- Patients without organ dysfunction can be successfully managed at a rural hospital.

Materials and Methods

- A retrospective observational study spanned a 10-year period
- To assess risk factors and prognosis, Mannheim peritonitis index (MPI) was used
- Outcome of interest were in-hospital morbidity and mortality.

Fig. 1. Main etiological factors



Results

- Out of 119 patients, 73 were men (61.4%)
- Age ranged 8-72 years, with peak incidence 21–30-years (N=43)
- Etiology of peritonitis is depicted in figure 1
- Patients with organ failure (N=29) had increased risk of death
- MPI ranged 10 to 32 points, with mean 22.1 ± 5.2 .
- MPI for patients who survived was significantly lower than the index for those who died (21.2 ± 4.5 , 95% CI 20.3–22.1 and 29.9 ± 2.4 , 95% CI 28.6–31.2 respectively, $p < .00001$)
- All 62 patients with MPI < 21 survived, while from 17 of those with MPI > 27 died 9 patients and only 6 discharged home (fig.2)
- In MPI of 21–27 cohort, chances of favorable outcome were high (37 patients were cured and 5 died)
- All deceased patients had MPI of 27 and above
- MPI values of 21 and 27 could be considered as important cut-offs in assessing individual prognosis for patients.

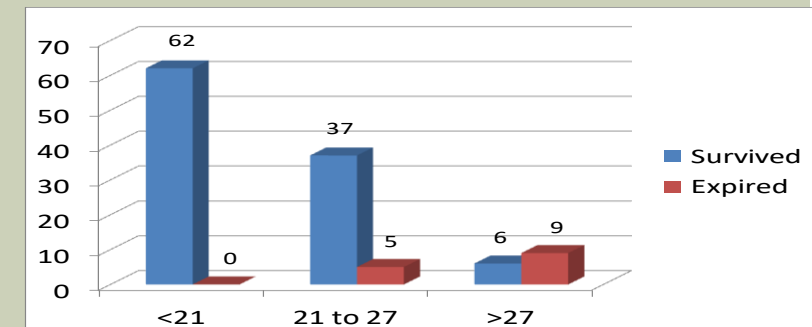
Table 1. Procedures performed

Appendicectomy	30
Closing of perforated peptic ulcer	27
Suturing of the stomach, bowel, uterus	30
Resection of the bowel with anastomosis	6
Hartmann's procedure	2
Hemicolectomy	2
Cholecystectomy	2
Resection of ovary, oophorectomy	8
Explorative laparotomy	10
Relaparotomy	8
Others	10
Total	135

Table 2. Outcomes

	Number	Organ dysfunction: number/%	Mortality: number/%
Perforated peptic ulcer	27	12/44	7/26
Acute appendicitis	26	3/12	1/4
PID	22	3/14	2/9.5
Perforation of small bowel	16	4/25	1/6
Abdominal trauma	10	3/33	1/10
Others	18	4/22	2/9.5
Total	119	29/24.4	14/11.8

Fig. 2. MPI and mortality



Conclusions

- The main sources of peritonitis, according to the current study, were perforated peptic ulcer, acute appendicitis and PID
- This study emphasizes the significance of organ failure for fatal outcome in peritonitis
- Patients without signs of organ failure could be successfully treated at a rural hospital that have an uninterrupted access to the operating theatre and trained staff
- MPI is a highly useful and informative tool for predicting patient outcome in peritonitis