

MEDICAL PRACTICE

For Debate . . .

Treatment of renal failure in a non-specialist unit

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Units to manage acute renal failure were developed so that clinical and technical skill could be accumulated and the management of patients improved. Increased research opportunities and better teaching were other advantages for such specialist centres, but these were offset by loss of continuity of patient care. For this latter reason and also because of a lack of specialist acute dialysis facilities it was decided to treat all cases of acute renal failure in the receiving district general hospital, which did not have a specialist renal unit. We compare results of such management with published results from specialist units.

Patients

METHODS

Patients with renal failure were treated in a six-bedded open subsection of a ward. The other patients, who formed the bulk of the medical and nursing work load, suffered from drug overdosage. Senior nurses, though not specifically trained in renal medicine, staffed the beds. Equipment was chosen on a basis of ease of use rather than efficiency and included a haemodialysis machine (Travenol Laboratories "RSP") and a peritoneal dialysis machine (LKB Laboratories). The hospital medical physics technicians gave technical help and the doctor in charge performed shunt surgery.

The capital cost of the dialysis machines (£8100) was raised from charitable sources, and associated, disposable equipment cost, per patient, was less than £300. No additional staff were engaged to meet the dialysis commitment.

Patients were accepted for treatment if there was a reversible element in the factors precipitating renal failure or if the cause of renal

failure was unknown. In general peritoneal dialysis was used; haemodialysis was resorted to only when substantial recovery of renal function was expected or peritoneal dialysis was either unsuccessful or inappropriate.

Results

Of 28 patients treated, 14 died and the remainder survived for at least six months after recovery. Among those who died there were three patients who were treated for only two, eight, or 12 hours, and who therefore did not have an adequate trial of treatment. Two patients were dialysed so that diagnostic procedures could be performed but were subsequently abandoned as carcinoma of the prostate with secondaries and carcinoma of the colon were found. A further four patients did not recover any useful renal function and were shown at necropsy to have no viable renal tissue. The table gives clinical details of the re-

Survivors and potential survivors treated for acute renal failure

Age/sex	Cause	Treatment	Major factors precipitating death
<i>Potential survivors</i>			
65 M	Influenza, bronchopneumonia	P	Chest infection
43 M	Pancreatitis	P	Toxaemia
30 F	Congenital small kidneys	P	Gram-negative infection
69 F	Analgesic nephropathy	P	Gram-negative infection
61 M	Chronic pyelonephritis	P	Peritonitis
<i>Survivors</i>			
24 F	Pre-eclampsia	P	
56 M	Hypertension	H	
36 M	Pneumonia, schizophrenia	P	
29 M	Sodium chlorate poisoning	H	
76 F	Barbiturate overdose	P	
35 M	Myeloma	P	
48 M	Polycystic disease	P	
62 M	Urinary tract infection, septicaemia	H	
81 M	Urinary tract infection, postprostatectomy	P	
71 F	Peritonitis, diverticular disease	H	
80 M	Obstructive uropathy	P	
62 M	Renal stones, pyelonephritis	P	
39 F	Salpingitis, septicaemia, peritonitis	H	
48 F	Cholecystitis, septicaemia	H	

P = Peritoneal dialysis. H = Haemodialysis.

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maining five patients who died but had evidence at necropsy of some potentially useful renal tissue together with the survivors. Simultaneous medication with gentamicin and frusemide (four cases) and blood transfusion (three) contributed to the onset of uraemia. Excessive crystalloid infusion with resulting pulmonary oedema was a cause of emergency dialysis in a further two patients.

Discussion

Age, diagnoses, length of dialysis, and clinical outcome in this series reflects the non-selective policy instituted for treating renal failure and does not differ substantially from that of other series from specialist centres.^{1 2} The cost of treating patients with acute renal failure was low relative to that experienced by specialist units. During the period of non-referral to the specialist centres, increased interest in managing renal failure has been

expressed by more referrals, particularly of older patients: unfortunately errors in prespecialist treatment have not diminished.

It may be concluded that managing acute renal failure outside specialist units can be carried out successfully at low cost and without an increase in patient mortality. This may be important if the present economic policies restricting the expansion of costly units are continued.

References

- ¹ Kennedy AC, Burton JA, Luke RG, *et al.* Factors affecting the prognosis in acute renal failure. *Q J Med* 1973;165:73-86.
- ² Kerr DNS. Acute renal failure. In: Black D, Jones NF, eds. *Renal diseases*. Oxford: Blackwell Scientific Publications, 1979:437-93.

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Lesson of the Week

Jejunioileal tuberculosis: a diagnostic pitfall in Crohn's disease

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We report a case of jejunioileal tuberculosis in a patient who was thought to be suffering from Crohn's disease.

Case report

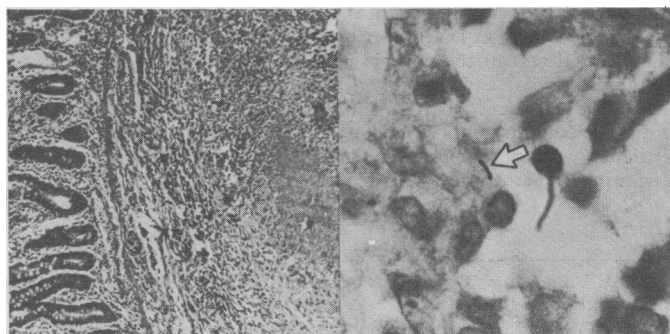
A 20-year-old white man presented with a six-month history of colicky abdominal pain, diarrhoea, night sweats, and weight loss. He was pale and wasted with poorly localised abdominal tenderness. Extensive investigation showed a mild malabsorption, and small bowel contrast studies showed jejunioileal ulceration. The results of chest x-ray examination and rectal and jejunal biopsies were normal. Probable Crohn's disease was diagnosed.

Initial conservative treatment only temporarily relieved his symptoms, and oral steroids were introduced six weeks after he presented. He deteriorated rapidly and was admitted with septicaemia. At this time an ill-defined, tender, central abdominal mass was noted. Despite intensive treatment with parenteral nutrition, antibiotics, and high-dose steroids, he developed subacute small bowel obstruction with signs of spreading irritation of the peritoneum. At laparotomy seven weeks after admission the entire small bowel except for the first loop of jejunum was inflamed and matted together. Separation of the coils of bowel showed collections of pus and intestinal contents from small perforations. The stomach, duodenum, and colon appeared normal. The clinical diagnosis

Exclude tuberculosis before using steroids to treat patients with suspected Crohn's disease.

of extensive Crohn's disease appeared to be confirmed, and a massive small bowel resection was performed with an end-to-end anastomosis between the upper jejunum and terminal ileum leaving 32 cm of small bowel.

Histology of the specimen (see figure) showed the changes of acute tuberculous enteritis. Steroids were stopped immediately, but it was difficult to treat the tuberculosis effectively because the remaining short length of small bowel prevented the patient taking oral medication. He received intravenous rifampicin and isoniazid and intramuscular streptomycin for six weeks, together



The histological specimen shows a caseating granuloma (left) and an acid-fast bacillus (right, arrow).

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