Letter to the Editor

Management of an acute abdomen following high-dose cytosine arabinoside

Sir,
Martell & Jacobs¹ in their article (October 1986 issue) suggest that early surgery offers 'the only realistic chance of survival' in patients developing an acute abdomen during the pancytopenic period following chemotherapy for leukaemia. This claim is made despite the fact that 3 out of 5 patients who underwent surgery died within 14 days post-operatively and all three patients who died received high-dose cytosine arabinoside. We present here our experience of the conservative management of acute abdominal problems after high-dose cytosine arabinoside treatment for leukaemia and lymphoma.

Between February 1983 and June 1986, 124 patients received 127 courses of cytosine arabinoside, 2 g/m² twice

daily with or without etoposide 100 mg/m² once or twice daily for 5 days. Twenty seven patients received cytosine arabinoside alone, in 75 patients etoposide once daily was added to the regimen and in 25 patients etoposide was administered twice daily.

Nineteen patients (15%) developed an acute abdomen with severe generalized abdominal pain, diarrhoea, and paralytic ileus with absent bowel sounds, almost certainly due to cytosine arabinoside. Eighteen out of 19 patients were treated conservatively with intravenous fluids, antibiotics, platelets, granulocyte infusion and blood product support where appropriate. One patient underwent laparotomy for bowel perforation due to a locally infiltrative fungal lesion (*Candida albicans*) and died on the thirteenth post-operative day.

Eighteen patients were therefore treated conservatively for their episode of acute abdomen; 7 died during the

Table I Details of patients who died

No.	Age/Sex	Diagnosis	WBC × 10 ⁹ /l	Platelets × 10 ⁹ /l	Death (days post- treatment)	Contributory causes of death	Comments
1.	30 F	AML 2nd relapse	0.1	31	17	Septicaemia DIC	Post-mortem Intramural haemorrhage in bowel.
2.	30 F	AML 1st relapse	0.5	33	17	Liver failure	2nd course of treatment in 6 months
3.	39 M	Resistant ALL	0.1	7	28	Septicaemia Renal and hepatic failure	
4.	41 M	AML 2nd relapse	0.1	9	28	Septicaemia Renal and hepatic failure	
5.	15 F	AML 2nd relapse	0.5	19	25	Septicaemia Renal failure	Given melphalan 140 mg/m ² after initial treatment for resistant disease
6.	36 F	Resistant NHL	0.1	17	35	Septicaemia	Required ventilation for 12 days before death
7.	15 F	AML 2nd relapse	0.3	22	21	Candida septicaemia. Renal and hepatic failure. D.I.C.	Previous bone marrow transplant
8.	41 M	Resistant AML	0.6	20	24	Septicaemia. Renal failure	
9.	33 M	Acute promyelocytic leukaemia	0.3	23	14	Cerebral haemorrhage	

AML—acute myeloid leukaemia; ALL—acute lymphoblastic leukaemia; NHL—non-hodgkin's lymphoma; DIC—disseminated intravascular coagulation; WBC—white blood cells.

neutropenic period of unresponsive septicaemia with or without multiple organ failure, one died of liver failure and one patient died of a cerebral haemorrhage (see Table I).

Martell & Jacobs cite a number of studies which suggest that surgical intervention has a role to play in leukaemic patients who are neutropenic following chemotherapy. However, none of these studies was randomized and as pointed out by several authors the patients treated conservatively were more severely ill and had lower performance status than those who underwent surgery. Such patient selection would

be bound to bias the results of any retrospective analysis as to the merits of surgery as opposed to conservative management for these patients.

We report here a 50% survival rate for patients who develop an acute abdomen after high-dose cytosine arabinoside. We therefore recommend that patients who develop an acute abdomen after receiving high-dose cytosine arabinoside should be managed conservatively and our results may reflect aggressive antibiotic and blood product support.

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Reference

1. Martell, R.W., Jacobs, P. Surgery for the acute abdomen in adults with leukaemia. *Postgrad Med J* 1986, **62**: 915-918.