SHORT REPORTS

Outcome of pregnancies associated with raised serum and normal amniotic fluid α fetoprotein concentrations

Open neural tube defects are associated with raised concentrations of α fetoprotein in amniotic fluid and maternal serum. Raised maternal serum α fetoprotein concentrations have also been associated with fetal distress, intrauterine death, threatened abortion, multiple pregnancy, exomphalos, congenital nephrosis, Turner's syndrome, and low birthweight (preterm) infants. On analysing perinatal and maternal morbidity in south Gwent we noted that pregnancies in which α fetoprotein concentrations were high in serum but normal in amniotic fluid seemed to have an increased incidence of complications. We carried out a prospective study to investigate this phenomenon further.

Patients, methods, and results

From August 1978 to June 1980, 4864 women were booked for delivery and 2913 were screened for neural tube defects at 16-18 weeks' gestation by estimation of serum α fetoprotein concentrations (Amersham radio-immunoassay technique). If the concentration was abnormal the estimation was repeated within one week when possible, and gestation was assessed ultrasonically. Amniocentesis was performed in those patients in whom the serum α fetoprotein concentration was high on two occasions (>95 th centile for gestational age). Those patients with normal amniotic fluid concentrations were reassured and continued their pregnancies.

The outcome of pregnancy in these women with normal amniotic fluid concentrations ($n=55$) was compared with that in a group of controls comprising 165 consecutive women delivering in the delivery unit during the period of the study. The control group had normal serum α fetoprotein concentrations and did not undergo amniocentesis. The groups were compared for the incidences of severe pre-eclampsia, antepartum haemorrhage, preterm labour, induction, birth weight if less than 2500 g or less than the 10th centile for gestation, Apgar score, gestational age at delivery, fetal abnormalities, and neonatal mortality. They were also compared for maternal age, weight, height, parity, and social class assessed according to the husband's occupation. Comparison was with the χ^2 test or Fisher's exact test (two tailed) when indicated.

Distributions and ranges of age, weight, parity, and social class were similar in both groups. No neural tube defects arose in either group, and fetal abnormalities that did occur were various and relatively minor, such as hypospadias. The incidences of preterm labour, low birth weight, fetal abnormalities, and perinatal mortality were significantly higher in the study group (table). Incidences of antepartum haemorrhage, assisted delivery, severe pre-eclampsia, low Apgar scores, and light for dates infants were also higher but did not reach significance. Three perinatal deaths occurred: there was one unexplained stillbirth, and two deaths were due to the respiratory distress syndrome in preterm infants.

Incidences of complications of pregnancy in women with high maternal serum but normal amniotic fluid α fetoprotein concentrations and controls

	Study group ($n=55$)	Controls ($n=165$)	Statistical test	P
Preterm labour	8	9	$\chi^2=4.78$	<0.05
Severe pre-eclampsia	8	11	$\chi^2=3.25$	NS
Antepartum haemorrhage	5	8	Fisher	NS
Assisted delivery (forceps)	7	9	$\chi^2=3.24$	NS
Low birth weight:				
<2500 g	8	9	$\chi^2=4.78$	<0.05
<10th centile	4	3	Fisher	NS
Apgar score at 1 min:				
<5	8	14	$\chi^2=1.68$	NS
<8	10	34	$\chi^2=0.15$	NS
Perinatal death	3	0	Fisher	<0.05
Fetal abnormality	4	1	Fisher	<0.05

Comment

High incidences of preterm labour and of infants of low birth weight in women with raised serum α fetoprotein concentrations have been noted in other studies,¹⁻³ and our figures, though small, support these findings and further suggest that the incidences of fetal abnormality and perinatal death are also increased in these women. The effect of amniocentesis on our results is difficult to evaluate. Previous studies, though reporting an increased incidence

of antepartum haemorrhage and respiratory distress syndrome, have not shown any increase in the incidences of preterm labour, intrauterine growth retardation, pre-eclampsia, or fetal compromise.^{4,5}

We suggest that patients with high serum and normal amniotic fluid α fetoprotein concentrations constitute an at risk group and should therefore be carefully monitored during pregnancy and labour.

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Analgesia in acute pancreatitis: comparison of buprenorphine and pethidine

The pain of acute pancreatitis is severe, often necessitating opiate analgesia. Pethidine has become the drug of choice, probably because classic teaching held that morphine causes spasm of the sphincter of Oddi. Buprenorphine, a new derivative of thebaine, provides longer analgesia after surgery and more effective pain relief in renal colic than conventional opiates.^{1,2} We compared buprenorphine and pethidine in the initial management of pain in acute pancreatitis.

Patients, methods, and results

Thirty two consecutive patients presenting with acute pancreatitis (serum amylase activity >1200 IU/l or urinary amylase activity >3000 IU/l) were randomly assigned to receive either intramuscular buprenorphine (0.3 mg) or pethidine (100 mg) from identical ampoules that had been randomly number coded by a computer in the hospital pharmacy. Routine supportive treatment was used. Subsequent analgesia (pethidine 100 mg) was provided on demand.

About 24 hours after initial administration of the drug pain was assessed on a standard linear analogue scale ranging from 0 to 10.³ Relief of pain was also assessed with an ordered categories scale (no pain=0; mild pain=1; moderate pain=2; severe pain=3). The duration of pain relief was determined by the patient's demand for further analgesia and was expressed as the mean number of hours free from pain in the first 24 hours after initial analgesia. The severity of the episode of pancreatitis was determined by prognostic factor scoring.⁴ The pain scores were compared with the Mann-Whitney test, and Fisher's exact test was used to compare the number of patients achieving complete pain relief.

Fifteen patients received pethidine and 17 buprenorphine. The groups were comparable for age and weight. One patient given buprenorphine and two given pethidine had severe pancreatitis. No deaths occurred. The table shows that there was no significant difference between the two groups with respect to the degree of pain before or after analgesia regardless of the method of assessment. The duration of pain relief was comparable in the two groups. Only one patient given pethidine initially and four given buprenorphine did

not require further analgesia. Nausea or vomiting was a presenting feature of pancreatitis in 11 patients treated with pethidine and 15 with buprenorphine. This settled after analgesia in six and seven patients respectively. Only one patient receiving buprenorphine developed vomiting after administration of the drug. Specific questioning did not elicit any other side effects.

Comparison of median pain scores before and after injection of pethidine and buprenorphine

	Pethidine (n = 15)	Buprenorphine (n = 17)
Linear analogue scale (range 0-10):		
Before injection	9.1	8.4
After injection	3.6	2.5
Difference	5.9	5.4
Ordered category scale (range 0-3):		
Before injection	3.0	2.9
After injection	1.1	1.1
Difference	1.9	1.6
Duration of pain relief (h)	9.5	9.2

Comment

This study shows that pethidine and buprenorphine provide comparable analgesia in acute pancreatitis. Although pethidine has some cost advantage over buprenorphine, it is a controlled and potentially addictive opiate. Potential addiction to narcotics in young adults presenting with recurrent episodes of pancreatitis, often secondary to alcohol abuse, is a cause for concern among clinicians treating this disease. Buprenorphine appears to have little potential for physical dependence³ and may be preferred in such patients. Potential objections to buprenorphine include its side effects of vomiting, dizziness, and respiratory depression, which are only partially reversed by naloxone. Respiratory depression was not seen in this study, but anxiety that it may occur may prevent the routine use of buprenorphine in acute pancreatitis, particularly in elderly patients with severe disease.

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Diagnosis in nine Nigerian study subjects correlated with evidence of HTLV infection

Case No	Age and sex	Social class	Habitation	Clinical diagnosis*	Sites affected†	Immunological phenotype‡	HTLV antibodies (titre)
1	25 M	Lower middle	City	CTCL	LN/S/CNS	ND	—
2	11 M	Lower	City	ALL	PB/BM	? Immature T	—
3	10 F	Lower	City	ALL	PB/BM	ND	—
4	19 M	Upper middle	City	ATL	L/S/PB/BM/HC	Mature T §	+ (4000)
5	21 M	Lower	City	HD	LN/LV/SP	ND	—
6	63 M	Lower	Rural	TSS	SP	ND	—
7	25 M	Lower	City	NHL	LN	ND	—
8	57 F	Lower	Rural	CLL ?T	PB/BM	ND	+ (1700)
9	15 F	Lower	City	BL	MS/BM	ND	—

*CTCL = Cutaneous T cell lymphoma. ALL = Acute lymphoblastic leukaemia. ATL = Adult T cell leukaemia. HD = Hodgkin's disease. TSS = Tropical splenomegaly syndrome. NHL = Non-Hodgkin's lymphoma. CLL = Chronic lymphocytic leukaemia. BL = Burkitt's lymphoma.
†LN = Lymph node. S = Skin. CNS = Central nervous system. PB = Peripheral blood. BM = Bone marrow. L = Lung. LV = Liver. HC = Hypercalcaemia. SP = Spleen.
‡ND = Not determined.
§Leukaemic and/or bone marrow cells positive by indirect immunofluorescence for mature T cell markers DA-2, OKT-11A, S33, WT-1, and J-5 and negative for Tdt.

Human T cell leukaemia virus associated lymphoproliferative disease: report of two cases in Nigeria

The association between animal leukaemia and retroviruses has long been established but only recently was their human equivalent—the human T leukaemia virus (HTLV)—discovered.¹ We report features of HTLV positive cases from Nigeria.

Present series

Nine patients with various forms of malignant lymphoproliferative disorders from Ibadan were sampled and sera tested with an enzyme linked immunosorbent assay for HTLV.² The table summarises the relevant clinical features in each case.

CASE HISTORIES OF HTLV SEROPOSITIVE PATIENTS

Case 4—A 19 year old Nigerian secondary school student of upper middle class had spent all his life in the metropolitan city of Lagos. Four months before admission he had been diagnosed as suffering from lichen planus, which regressed with topical and systemic corticosteroids. One month later rapidly progressive and generalised nodular skin lesions erupted and he became bedridden. Examination on admission showed nodular violaceous skin lesions and generalised adenopathy without enlarged viscera. Radiographically there was reticulonodular shadowing in both lung fields but no evidence of skeletal lesions. Skin biopsy showed lesions similar to those of mycosis fungoides. The white cell count was $6.2 \times 10^9/l$ and 10% of the cells were abnormal, resembling the tumour cell bone marrow infiltrate. Cell surfaces of a skin nodule and bone marrow lymphocytes were typed as mature T, consistent with a diagnosis of adult T cell leukaemia. Doxorubicin hydrochloride 60 mg/m² was given. When last seen at six month follow up he was well.

Case 8—This patient was a 57 year old Nigerian petty trader of lower socioeconomic class. On presentation she gave a three month history of progressive weight loss and abdominal swelling. She was moderately emaciated and had generalised adenopathy and an enlarged liver and spleen. Serum calcium concentration measured on a single occasion was normal. Clinically she had chronic lymphocytic leukaemia. She defaulted from follow up after beginning chlorambucil and is believed to have died three months later.

Comment

These two Nigerian patients had antibodies against HTLV and the clinical features of HTLV associated leukaemia-lymphoma. In one case we documented a T cell phenotype similar to that in other cases of the virus associated sentinel disease adult T cell leukaemia.³ Thus typical cases of adult T cell leukaemia have now been documented from Japan, the West Indies, South America, in blacks from the southern United States, and, with this report, for the first time in black Africans.³

In our case 1 the patient had skin lesions consistent with cutaneous T cell lymphoma and was HTLV seronegative. This observation confirms that of reports that typical cutaneous T cell lymphoma is only rarely associated with HTLV infection.³ The transient occurrence of hypercalcaemia in our case 4 was consistent with reports of this abnormality at various stages in HTLV associated