

## Screening for Cystic Fibrosis

Sir,

In their Short Report on screening for cystic fibrosis, Vol. 47, pages 131-134, Drs. Cain, Deall, and Noble expressed the hope that their trial would stimulate other maternity units to carry out similar surveys so that the efficiency of the method could be more rapidly assessed.

In 1969 we started developing an immunochemical method to analyse meconium for albumin, and since August 1971 we have conducted a screening programme for CF in newborns at the University Hospital, Uppsala, Sweden. So far 2073 newborn infants have been screened and two cases of CF have been found.

A specimen of meconium is collected from the napkin, freeze-dried, and an aliquot is dissolved. After centrifugation the concentration of albumin in the supernatant is determined by single radial immunodiffusion technique. The results are given in the Table.

TABLE  
*Albumin in Meconium*  
(expressed as mg albumin/g dry weight meconium)

	<5 mg/g*		5-20 mg/g†		>20 mg/g‡	
	Total No.	Thereof CFs	Total No.	Thereof CFs	Total No.	Thereof CFs
Included in the screening programme	2057	0 (?)	12	0	4	2
Clinically suspected (not included in screening programme)	23	0 (?)	2	0	8	7

\*In this group only sibs of CF children and children with otherwise strong suspicion of CF have been sweat tested.

†In these groups all children have been sweat tested. The diagnosis of CF is based on pathological sweat test (pilocarpine-iontophoresis method), and one of the clinical signs of meconium ileus, lung involvement and/or malnutrition.

In the screening programme there were four meconiums with more than 20 mg albumin/g dry weight. Two of these came from newborns who were subsequently diagnosed as CF (22 mg and 160 mg albumin/g meconium respectively), one came from a child with melaena neonatorum (150 mg albumin/g meconium), and one from a child who is still perfectly healthy (80 mg albumin/g meconium).

In addition, we have analysed 33 meconiums from newborns who were clinically suspected of CF. 8 of these specimens had more than 20 mg albumin/g

meconium, 7 of which were from children later diagnosed as CF by pathologically raised sweat electrolytes. Six of the children had meconium ileus and the seventh was a sib of a known CF child. The eighth meconium in this series with raised albumin concentration (52 mg albumin/g meconium) came from a child with atresia of the small bowel (normal sweat test). The 25 clinically suspected children with albumin concentration under 20 mg/g meconium included 10 sibs of known CF children, 4 children with bowel obstructions, and 11 children with delayed passing of meconium or with unusually viscous meconium.

In order to establish the diagnostic value of the present screening method, it would be advantageous for us to receive meconiums from patients with a clinical suspicion of CF, e.g. patients with meconium ileus, sibs of CF children, or patients with positive findings by other screening programmes.

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## Spontaneous Femoral Artery Thrombosis and Intermittent Claudication in Childhood Nephrotic Syndrome

Sir,

The report in this journal of femoral artery thrombosis after femoral vein puncture in a nephrotic child (Cameron *et al.*, 1971) prompts us to report a case in which a similar thrombosis occurred spontaneously. We wish to draw attention to factors that may have contributed to an increased risk of arterial occlusion.

A boy aged 3 years presented with generalized oedema, oliguria of 48 hours' duration, and ascites. The blood pressure was 110/70 mmHg, and there was heavy proteinuria. The blood urea and electrolytes were normal, total plasma protein 4.2g/100 ml,  $\beta$ IC globulin 80 mg/100 ml, and creatinine clearance 20.3 ml/min per m<sup>2</sup>. The ratio of the clearance of IgG to the clearance of transferrin was 0.2, indicating moderately nonselective proteinuria. Urinary microscopy showed hyaline and granular casts, but no growth on culture.

Prednisone 40 mg/day was started after a 36-hour