of only 125/minute which was interpreted incorrectly as a tachycardia. In fact their patient showed sinus rhythm throughout with an interventricular conduction delay on one occasion and 2:1 atrioventricular block on another.

If we are to accept this report of supraventricular tachycardia caused by hyperkalaemia, the authors should, therefore:

(1) Define 'supraventricular tachycardia' and 'bradycardia.'
(2) Detail the rate and the duration of tachycardia, and their relationship to plasma potassium concentration.
(3) Describe the electrocardiographic characteristics of the tachycardias and the bradycardias. These may give a valuable insight into the mechanisms of the arrhythmias.
(4) Provide information about any observed electrocardiographic abnormalities which are known to occur in association with hyperkalaemia (such as T wave changes, QRS widening, prolongation and flattening of the P waves, etc).

It is important that the findings reported in this paper should be well substantiated because tachycardia secondary to hyperkalaemia in the neonate has not been reported previously. Just as one would not consider a report on hyperkalaemia which did not define hyperkalaemia and give details of potassium concentrations recorded, so it is difficult to take seriously a report of 'supraventricular tachycardia' and 'bradycardia' which fails to define either arrhythmia and gives no details or documentary evidence.

References

Selective medical examinations on starting school

Sir,

We read with interest the article by O'Callaghan and Colver. The authors describe a class review after the first term, but it is apparent that the children have already undergone a four to four and a half year check. From the class review, 20% of children are selected to be seen, which may be a repetition of earlier work.

It is not clear whether the four to four and a half year check is a population screen and whether the same doctor is responsible for the school review. No data on the numbers of problems identified at this check are given, or whether any educational liaison is undertaken.

In the Southampton area with a school age population of approximately 63,000 a selective system for school medicals has been in operation since 1970. All children are seen at six weeks and four and a half years, the latter representing a preschool medical examination usually performed by a clinical medical officer who is responsible for school follow up. Problems from health visitor assessments at seven to nine months and two and a half years are selected for clinical medical officer attention. Most defects are, therefore, identified before a child enters school.

The preschool examination permits an appraisal of the 'whole child' and all children seen are discussed with the headteacher and nurse. The doctor will select out those few children requiring school follow up. Selection visits each term with the head/class teachers and school nurse follow, allowing continuity.

The approach to selective screening adopted by the authors appeared to be rather disjointed involving a wide range of professionals. We should like to be reassured that the doctor providing the service looks at the whole child and having done so, provides continuity from preschool to school years.

In conclusion, the article gives the impression that selectivity is a new concept and suggests that blanket examinations are not necessary. Two important factors

C WREN
Freeman Hospital,
Freeman Road, High Heaton,
Newcastle upon Tyne NE7 7DN

We read with interest the comments of Dr Wren. We define supraventricular tachycardia as a heart rate of greater than 200 bpm with completely regular P waves on the cardiac monitor. It is extremely difficult to perform full electrocardiography in a sick preterm infant and we do not have facilities for permanent paper recording. In the infants that we have reported, the cardiac rhythm converted over a matter of seconds from sinus rhythm to a supraventricular tachycardia and remained in that rhythm for some time before suddenly reverting to a slower rate. This does not occur with sinus tachycardia due to systemic hypotension and we think that this is an unlikely cause for our findings. We have defined a bradycardia induced by hyperkalaemia as a heart below 60 bpm lasting for more than 60 seconds in the absence of other clinically apparent causes (for example, hypoxia or endotracheal suction.) The arrhythmias we have described all occurred when the serum potassium concentrations were raised, although in four infants the arrhythmia preceded the diagnosis of hyperkalaemia and in fact had led the medical staff to measure the serum electrolytes. We are surprised that Dr Wren states that supraventricular tachycardia cannot occur during hyperkalaemia, although we agree that bradyarrhythmias are most commonly described. We encounter supraventricular tachycardia only rarely within the first 48 hours of life in the preterm infant but we have found that most occur at a time when the serum potassium concentrations are raised. Although the relationship between hyperkalaemia and supraventricular tachycardia is poorly described, we suggest that they are causally linked.

Drs Shortland and Levene comment:

We define supraventricular tachycardia as a heart rate of greater than 200 bpm with completely regular P waves on the cardiac monitor. It is extremely difficult to perform full electrocardiography in a sick preterm infant and we do not have facilities for permanent paper recording. In the infants that we have reported, the cardiac rhythm converted over a matter of seconds from sinus rhythm to a supraventricular tachycardia and remained in that rhythm for some time before suddenly reverting to a slower rate. This does not occur with sinus tachycardia due to systemic hypotension and we think that this is an unlikely cause for
seem to be missing—continuity of care and an appraisal of the ‘whole child.’

References

E Berridge, C Hardie, F Nasrallah, C Church, V McGirgor, A Salt, and P WAT
Department of Child Health, Central Health Clinic, East Park Terrace, Southampton SO9 4WN

Drs Colver and O’Callaghan comment:
Thank you for the opportunity to reply to the letter of Dr Berridge and colleagues. We are pleased that they also operate a ‘selective system’ and provide further arguments to support the concept.

We argued that ‘selectivity’ is an underused practice, not a revolutionary concept. A quarter of the children selected to be seen because the preschool record was not available had their essential screening tests and to that extent there was repetition. We do not understand the criticism that to gather information from people who already know the child is a ‘disjointed’ approach. Technicians are trained to use the pure tone audiometer and the Keystone apparatus. Altogether 98% of children were screened for hearing and vision, of whom 7% failed hearing and 4% vision. Two children over the last five years received hearing aids after failing the hearing test and an unknown number received grommets. We do not know the outcome of the vision failures but do know that 90% attended their family doctor or optician. We recognised the gaps in information but already have clearer policy and more information than most health districts.1

A different philosophy towards integration within primary care may distinguish the Southampton system from ours. We feel that preschool surveillance should be integrated in primary care,2 and that ‘continuity of care’ comes best from the family doctor who already provides continuity for the majority of medical problems. Parents and teachers are best placed to look at the ‘whole child’ in the first instance. If a concern presents through school which may have a medical component, we agree that the school doctor is then ideally placed to look at the whole child.

The late Dr Tyrrell argued for fewer, better trained school doctors taking referrals from family doctors or school nurses, not duplicating their work.3 Greater use of selective examination and greater emphasis on problem orientated work will help define this more restricted and difficult role.

References

Dry lung syndrome after oligohydramnios

Sir,

We were interested to read Professor McIntosh’s recent paper describing ‘functional’ lung hypoplasia after preterm membrane rupture (PROM).1 This has not been our experience among 30 pregnancies with PROM of greater than two weeks’ duration followed prospectively; in that series some neonates developed anatomical but not ‘functional’ pulmonary hypoplasia (as defined by Professor McIntosh).2 Eight of the 30 neonates died within 48 hours of life from respiratory failure, despite inflation pressures of up to 55 cm H2O. At necropsy pulmonary hypoplasia was confirmed in all.2 Of the 22 infants who survived, 11 required no respiratory support, and 11 required artificial ventilation. One child had severe respiratory distress syndrome and required a maximum peak inspiratory pressure of 30 cm H2O, but among the other 10 the mean maximum inflation pressure was 17 cm H2O (range 12–25 cm H2O).

Professor McIntosh attributed ‘functional’ lung hypoplasia to dry lungs, which resulted from leakage of lung fluid exacerbated by external compression on the fetal chest. In our series lung hypoplasia occurred in pregnancies with membrane rupture at significantly earlier gestations than those pregnancies of neonates without pulmonary hypoplasia (p<0.01). The degree and duration of the oligohydramnios produced by membrane rupture was, however, not significantly different between the two groups, which suggests that compression on the fetal chest cannot be the sole mechanism in producing pulmonary hypoplasia. Indeed, the most significant difference between our two groups was the absence of fetal breathing movements in the group dying from pulmonary hypoplasia, confirming our preliminary findings reported earlier.3

Our experience of a further five infants, ventilated during the same time period as our study group, but from pregnancies not complicated by PROM, has led us to consider explanations other than a ‘dry lung’ for the ventilatory pattern described by Professor McIntosh.3 Three of the infants had severe respiratory distress syndrome, evidenced by classical chest radiographs, and were septicaemic. All five infants required high pressure ventilation (greater than 30 cm H2O) both for resuscitation and subsequent ventilation. After 72 hours, and with improvement in both conditions, the ventilatory pressures were rapidly decreased and all five infants were successfully weaned over the subsequent 48 hours.

References
3 Blott M, Greenough A, Nicoleides KN, Moccoso G, Gibb D, Campbell S. Fetal breathing movements predict favourable