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


Dr. Wren's comment:

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.

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 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
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). We have experienced some neonates developed anatomical but not ‘functional’ pulmonary hypoplasia (as defined by Professor McIntosh). 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. 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.

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 lead us to consider explanations other than a ‘dry lung’ for the ventilatory pattern described by Professor McIntosh.

Three of the infants had severe respiratory distress syndrome, evidenced by classical chest radiographs, and two 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, Nicolaides KN, Moscoso G, Gibb D, Campbell S. Fetal breathing movements predict favourable...
Selective medical examinations on starting school.

E Berridge, C Hardie, F Nasrallah, C Church, V McGrigor, A Salter and P Watt

Arch Dis Child 1988 63: 682-683
doi: 10.1136/adc.63.6.682-a

Updated information and services can be found at:
http://adc.bmj.com/content/63/6/682.1.citation

These include:

Email alerting service

Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/