smallest preterm infants. This group are very vulnerable to minor trauma, however, and a truly soft catheter is essential; we have successfully used Argyle 10 FG chest drains. These can be introduced directly over a wire (although with greater difficulty than the Pendlebury catheter as they are so much softer) or through a 10 FG peel away sheath. We have modified them by cutting very small extra holes along their length, and have then introduced the drain right up to the point of its widening. In this way the catheter curls up in the abdomen and the drain fits tightly into the skin entry site. There is no ideal connection available, but the drain end can be cut off at the point on its widening diameter where the male end of a Luer lock will fit snugly. Currently a manufacturer is developing a Tenckhoff type catheter but of 11 FG diameter, which should provide a better solution for this particular group of patients.

We have had very few problems with our Tenckhoff catheters which we have used in 18 patients aged 2 days to 15 years, weighing 2.6 to 64 kg. One repeatedly blocked in a boy with extensive intra-abdominal malignancy. We use short straight catheters in newborns, and randomly allocate older children to have straight or curled catheters to assess whether either has any advantage; so far both types have been equally trouble free.

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Increasing incidence of retinoblastoma?

StR,—It has been apparent to clinical staff here at the Children's Hospital, Birmingham that the occurrence of sporadic retinoblastoma cases has been increasing in recent years. In particular, patients presenting bilaterally seem to be increasing in proportional terms. The Children's Hospital in Birmingham is the regional referral centre for paediatric malignancies in the West Midlands Health Authority Region (WMHAR) and so the simplest explanation would be an increase in the referral of cases. This seemed an unlikely explanation as referral was thought to have been high for several years. We sought therefore to investigate the incidence of all forms of retinoblastoma in the WMHAR during the five year period 1984–8, this latter year being the most recent date for which population based data is available. We proposed to compare this with the two preceding five year periods in order to assess whether this anecdotal observation was sustainable.

This study was undertaken by the West Midlands Regional Children's Tumour Registry, which collects data on all cases of cancer diagnosed in children in the WMHAR. In order to ensure completeness and accuracy, for retinoblastoma cases in particular, we chose to validate the data in two ways. In the first instance a letter was sent to all consultant ophthalmologists in the region requesting
details of all cases known to them through their practice. A subsequent letter was then sent to the general practitioner of each identified case to confirm the information abstracted from the hospital notes assessing laterality and the possible presence of a family history.

The results in the table show that sporadic cases were indeed raised in number during the latest time period. While the incidence of sporadic unilateral cases has remained relatively constant during all three time periods under study, however, the sporadic bilateral cases have more than doubled in frequency in the period 1984–8 compared with the two previous five year periods. During this latest period there were more bilateral than unilateral sporadic cases. This is at odds with the currently accepted usual ratio of approximately 70% of sporadic cases being unilateral, and which was also seen in our two earlier time periods. Population change cannot account for the overall change in incidence, as this has been decreasing during the study period.

Thus the interesting clinical observation appears to be borne out in the population based series derived from this region. As the number of cases involved is very small, however, it will be important to see if this finding is substantiated by the much larger national database of cases which is currently being assembled and to which we are contributing these data. It will also be important to monitor the incidence in future years to see if the trend continues.

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Complication of a central venous line in the newborn

StR,—Coincident with the report of Gladman et al on Staphylococcus epidermidis and the retention of a neonatal percutaneous central venous catheter,1 a baby died in our unit at 8 weeks of age due to superior vena cava obstruction and heart failure caused by a large thrombus in the right atrium, which was related to an indwelling central venous line (figure). This baby, born at 24 weeks' gestation and weighing 740 g at birth, had a surgically placed venous catheter on day 13 of life because of the respiratory difficulties in peripheral venous access. The line was used for continuous infusion of 10% dextrose and Vamin amino acid mixture (KabiVitrum) until day 50, when he was successfully weaned off the ventilator and enteral feeding was started. The central venous line, however, was allowed to remain in situ because of the baby's unstable clinical condition and uncertainty about the success of enteral feeding, and kept patent by a slow infusion of heparinised normal saline. A week later, this baby developed acute respiratory failure due to a large pleural effusion on the right side requiring further mechanical ventilation. The pleural effusion continued to accumulate despite repeated aspiration of 30-40 ml of serous fluid at a time. He subsequently developed generalised oedema and oliguria which proved resistant to various therapeutic manoeuvres including fluid restriction, maintenance serum albumin in 'normal' range by infusions of 20% salt poor albumin, and administration of diuretics. He died on day 62 due to cardiorespiratory failure. An attempt to remove the catheter at this time failed despite a firm continuous traction because of it's tethering to the vein; this was confirmed at necropsy.

Central venous lines are increasingly being used in neonatal units when peripheral venous access becomes near impossible in very immature babies. It remains unclear however, whether the true incidence of complications with the use of central venous lines is increasing, and this needs to be studied.

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Incidence of retinoblastoma in WMHAR, 1974–88

<table>
<thead>
<tr>
<th>Period</th>
<th>Population*</th>
<th>Sporadic unilateral</th>
<th>Sporadic bilateral</th>
<th>Sporadic all</th>
<th>Familial unilateral</th>
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<td>4</td>
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<td>10</td>
<td>18</td>
<td>1</td>
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*Mid period population estimate (×10, aged 0–14 years).