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The aphorisms of Ambroise Paré

EDITOR.—Professor Peter M Dunn cited four aphorisms of Ambroise Paré which are still pertinent today.

The humanity and gentleness of Ambroise Paré, unexpected in an army surgeon of the sixteenth century, whom we would tend to imagine as a butcher, are also documented by another of his aphorisms: '*Guérir parfois, soulager souvent, consoler toujours*' ('To heal sometimes, to relieve often, to console always'), a relevant lesson for all medical practitioners.

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Extensive necrotising enterocolitis after a prolonged period of supraventricular tachycardia

EDITOR.—We describe a neonate who developed extensive necrotising enterocolitis (NEC) after a prolonged period of supraventricular tachycardia (SVT).

Case report

A previously healthy 24 year old mother had an uneventful pregnancy until she went into spontaneous labour at 35 weeks. A fetal ultrasound scan showed a mildly hydropic baby with ascites, an enlarged heart, and a heart rate of above 200 beats a minute.

After delivery (by emergency caesarean section) the baby was noted to be oedematous with hepatomegaly. An echocardiogram showed a structurally normal heart that was dilated and poorly functioning. His initial ECG was consistent with an AV re-entry tachycardia.

He remained in SVT despite treatment with adenosine, digoxin, propranolol, flecainide and direct current (DC) cardioversion. On day 7 he had a spontaneous and sustained reversion to sinus rhythm and an ECG indicated Wolff-Parkinson-White syndrome.

On day 8 he became shocked with a distended abdomen. An abdominal x ray picture showed free gas and at laparotomy a caecal perforation was demonstrated and resected. After initial improvement he developed *Klebsiella* septicaemia on day 18. He had persistent and profound thrombocytopenia and adequate antibiotic treatment failed to eradicate the organism. At laparotomy on day 26 extensive necrotising enterocolitis of his colon was found and resected. His recovery was

rapid and his only subsequent episode of SVT occurred at the age of 3 months, on induction of anaesthesia for reversal of his ileostomy.

In utero SVT is increasingly being diagnosed and is well recognised as giving fetal haemodynamic compromise, which may lead to hydrops, causing a difficult delivery or even fetal death.¹ Periventricular leucomalacia has also been described.² We are not aware of any reports of NEC in a baby with in utero SVT. Although the aetiology of NEC is poorly understood, poor gut perfusion is known to contribute. Decreased visceral blood flow is not recognised as a side effect of any of the antiarrhythmic agents used in our case. He had no other risk factors for NEC and had not been enterally fed. This baby had a prolonged period of compromise of his visceral circulation secondary to his SVT both in and ex utero. We suggest that this was the main causative factor for his NEC.

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Gastric motility and gastric emptying

EDITOR.—We are indebted to Kelly and Newell for the excellent summary of gastric ontogeny.¹ In their discussion of gastric motility and the measurement of gastric emptying, they state 'a technique capable of repeated measurements of emptying of small volume feeds without disturbance of the infant in intensive care is required'. They do not mention the use of applied potential tomography (APT) — a form of electric impedance tomography (EIT). This method, which uses low electric currents, is non-invasive, and involves no radiation, provides just such a technique.²⁻⁴

In investigating preterm infants we found the APT method easy to perform, caused minimal or no upset — it need not alter the normal feeding regimen — and provided

validated and reproducible results. Our results from studying 53 infants differed from those quoted by Kelly and Newell in that while there was a clear difference in gastric emptying between Dioralyte and milk, there was no difference between breast milk and formula.³ Further research suggests that the method may also be used to study gastric motility directly.

The equipment is readily available and by modern standards is quite cheap, although its use can be time consuming and requires attention to detail.

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Drs Newell and Kelly comment:

We thank Dickson and Nour for their kind comments. We were aware of the use of impedance to measure gastric emptying and have previously explored its use, using a tetrapolar system. In the preterm infant, however, shifting baseline impedance thwarted attempts to measure gastric emptying. We were able, as they have been, successfully to use impedance to measure gastric emptying in infants and older children with normal and abnormal patterns.¹

We are therefore delighted to hear that applied potential tomography has been used successfully to measure the gastric emptying of milk in preterm infants. It is, however, troubling that they found no difference between different milks. The more rapid emptying of breast milk compared with formula has been shown in other studies, using dye dilution,² scintigraphy,³ and our ultrasound technique.⁴

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