

in establishing the cause of the patient's recurrent thrombotic occlusions in life.

MJ PHILLIPS  
Consultant Haematologist,  
Taunton and Somerset Hospital,  
Musgrove Park,  
Taunton,  
Somerset TA1 5DA

- 1 Levi M, Bronkhorst C, Noorduyt LA, Vreeken J. Recurrent thrombotic occlusions of arteries and veins caused by intravascular metastatic adenocarcinoma. *J Clin Pathol* 1994;47:858-9.

*Dr Levi comments:*

Although not reported in our paper, a bone marrow trephine biopsy was performed in our patient and did not reveal any abnormalities. At necropsy, however, bone marrow studies were not carried out and therefore malignant cells may have been missed in the original biopsy. We can only underline the importance of bone marrow studies in patients with suspected but unconfirmed malignant disease.

M LEVI  
Department of Internal Medicine,  
Academic Medical Centre, F-4,  
Meibergdreef 9,  
1105 AZ Amsterdam,  
The Netherlands

**A proposed SI unit for number**

I believe that a dimensionless unit for number (unit) would be valuable, fill a gap, simplify the expression of very large and very small numbers, and in pathology have particular use for particle counts. I propose the "quant", a name which suggests its use and is linguistically neutral, and the symbol "q", following the convention that only units named after a scientist use an upper case letter in their symbol — except for L as the alternative to l for the litre. The quant would carry the standard prefixes for multiples and sub-multiples used with all symbols for units.<sup>1</sup> For example, an erythrocyte count in health, instead of  $5.1 \times 10^{12}$ , which requires a multiplication sign and a superscript and can be inconvenient for typing and word-processing, would be 5.1 Tq/l (teraquants per litre) and similarly a leucocyte count would be 6.8 Gq/l.

Perhaps such a unit has already been considered and rejected by the International Committee for Weights and Measures (CIPM)?

DN BARON  
47 Holne Chase,  
London N2 0QG

- 1 Baron DN. *Units, symbols, and abbreviations*. 5th edn. London: Royal Society of Medicine Press, 1994.

*Urea and ammonium concentrations in serum and gastric juice in children with and without H pylori infection. Results presented as means and ranges*

	Blood serum		Gastric juice	
	Urea (mmol/l)	Ammonium (mmol/l)	Urea (mmol/l)	Ammonium (mmol/l)
<i>H pylori</i> status				
Positive	4.12 ± 0.46 (2.2-7.5)	0.04 ± 0.01 (0.03-0.05)	1.37 ± 0.14 (0.09-3.33)	2.79 ± 0.44 (0.68-3.34)
Negative	4.46 ± 0.41 (2.3-7.8)	0.04 ± 0.02 (0.02-0.06)	3.56 ± 0.36 (1.04-5.36)	0.27 ± 0.09 (0.0331-0.69)

**Intra-gastric urea hydrolysis in children infected with *Helicobacter pylori***

We read with interest the article by Neithercut *et al*<sup>1</sup> reporting the measurement of urea and ammonium concentrations in gastric juice in patients infected with *Helicobacter pylori*. This research is important as this non-invasive technique may be of diagnostic value, particularly in children, and also because diagnosis of *H pylori* infection following biopsy of the gastric mucosa may lead to false negative results due to patchy dissemination of the organism.<sup>2</sup>

Here, we report the measurement of urea and ammonium concentrations in gastric juice in 63 children (mean age  $9.4 \pm 2.3$  years, range 5 to 14 years) with *H pylori* associated gastritis. The control group comprised 24 children in the same age range with *H pylori* infection. *H pylori* infection was diagnosed by the rapid urease test, histological examination following staining with Giemsa and serological analysis for the detection of specific IgG antibodies (Roche, Switzerland).<sup>3</sup> Urea and ammonium concentrations in gastric juice and blood serum were measured using a manual diacetylmoxime method (Lachema, Brno, Czechoslovakia) and a modified Keller<sup>4</sup> method, respectively. Gastric juice pH was also measured. Children with bile reflux were excluded from this study to reduce the possibility of false positive results.<sup>5</sup> Statistical analysis was performed using the parametric Student's *t* test.

The results of our study are summarised in the table. The results showed significant differences between the urea and ammonium concentrations in gastric juice of children with and without *H pylori* infection ( $p < 0.01$ ).

The concentrations of these substrates in blood did not exceed normal values and did not differ significantly from each other ( $p > 0.05$ ), therefore, serum concentrations cannot influence the concentrations of those substrates in gastric juice.

Statistical analysis suggests that the pH of gastric juice does not correlate with urea and ammonium concentrations and that the urea and ammonium concentrations do not correlate with each other.

In conclusion, measurement of urea and ammonium concentrations in gastric juice may be useful for the diagnosis of *H pylori* infection in children.

AA NIJEVITCH  
ZM YELITCHEVA  
Bashkirian Children's Hospital,  
450022 Ufa, Bashkortostan, Russia

- 1 Neithercut WD, El Nujumi AM, McColl KEL. Measurement of urea and ammonium concentrations in gastric juice. *J Clin Pathol* 1993; 46:462-4.  
2 Glassman MS, Dallal S, Berezin SH, Bostwick HE, Newman LJ, Perez-Perez GI, *et al*. *Helicobacter pylori*-related gastroduodenal disease in children. Diagnostic utility of enzyme-linked immunosorbent assay. *Dig Dis Sci* 1990; 35:993-7.

- 3 Mitchell HM, Bohane TD, Tobias V, Bullpitt P, Daskalopoulos G, Carrick J, *et al*. *Helicobacter pylori* infection in children: potential clues to pathogenesis. *J Pediatr Gastroenterol Nutr* 1993; 16:120-5.  
4 Keller H, Müller-Beissenhirtz W, Neumann E. Eine methode zur ammoniakbestimmung im cappillarblut. *Klin Wochenschr* 1967;45:314-16.  
5 Borschein W, Heilmann KL, Bauernfeind A. Intra-gastrale ammoniakbildung bei *Campylobacter pylori* - assoziierter gastritis. *Med Klin* 1989;84:329-32.

## Notices

**Continuing Medical Education in Europe: The way forward through European collaboration**

A major international conference bringing together the leaders of medical education in Europe will take place on

Thursday 30 and Friday 31 March 1995

at

Royal College of Physicians,  
11 St Andrews Place,  
London NW1 4LE

(by kind permission of the Treasurer)

For further information please contact: Mrs J M Coops, Conference Office, c/o The Fellowship of Postgraduate Medicine, 12 Chandos Street, London W1M 9DE (tel: 0171 636 6334; fax: 0171 436 2535).

**Clinical Pathology Accreditation (UK) Ltd**

CPA Conference 1995

**Pathology goes to market**

Wednesday 22 March 1995

Royal College of Physicians,  
11 St Andrew's Place, London NW1 4LE  
(by kind permission of the Treasurer)

CPA (UK) Ltd is holding its third annual symposium in March 1995. The previous events were oversubscribed and widely reported. This year we are concentrating on the views of purchasers and providers of pathology, as the temperature of the marketplace rises. The content of the symposium should once again ensure a lively discussion.

Registration Fee: £95 (to include coffee, lunch and tea).

Further information and registration forms can be obtained from: CPA Central Office, Pathology Block, Children's Hospital, Sheffield S10 2TH (tel: 0742 797472; fax: 0742 780428).