Intra gastric urea hydrolysis in children infected with Helicobacter pylori

We read with interest the article by Neithercut et al 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.°

Here, we report the measurement of urea and ammonium concentrations in gastric juice in 63 children (mean age 9.4 ± 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). Urea and ammonium concentrations in gastric juice and blood serum were measured using a manual diacetylmonoxime method (Lachema, Brno, Czechoslovakia) and a modified Keller 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. 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 these 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.

# Notice

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 Andrews 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).
A proposed SI unit for number.

D N Baron

doi: 10.1136/jcp.48.2.187-a

Updated information and services can be found at:
http://jcp.bmj.com/content/48/2/187.1.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/