



Vienna Academy
of Postgraduate
Medical Education
and Research
Conference and
Association Management

EHSG 2003 - European Helicobacter Study Group - XVIth International Workshop,
September 3 - 6, 2003 , Stockholm, Sweden

Validation of a new portable near patient urea breath test; **the Heliprobe system**

Wink A de Boer (1), Claudia van Alfen (1), Johan Ryden, (2)

(1) Ziekenhuis Bernhoven, dept of Internal Medicine, Oss the Netherlands, (2) Noster System AB, Stockholm, Sweden.

Background: Test&Treat is the evidence-based optimal strategy for the dyspepsia in primary care. According to the Maastricht guidelines urea breath tests (UBT) are the preferred non-invasive initial *Helicobacter* test. Usually breath samples need to be mailed to a central facility. We tested a new portable “near patient” ^{14}C -UBT designed for primary care, thus obviating the need to refer the patient.

Methods: Between April 2000 - January 2002 endoscoped patients in whom biopsies were taken for *Helicobacter* were asked to return for UBT. They received $1\mu\text{Ci}$ (37kBq) of ^{14}C -urea (Helicap capsule) with citric acid. After 10 minutes the patients exhaled into a breathcard. After saturation it was inserted into the Heliprobe machine. Results take 5 minutes. Infection status was based on number of detected ^{14}C counts per measurement (d): infected if $d \geq 50$, not-infected if $d \leq 25$, and indeterminate for d-values in-between.

Results: 107 pts participated, 1 was excluded due to indeterminate result. In all pts 7 biopsies were taken (antrum: 2 histology, 1 culture, 1 CLO. Corpus: 2 histology, 1 CLO). Combined biopsy results served as gold standard. Prevalence was 39%. The Heliprobe System was easy to use and results were obtained within 20 minutes. Results: Sensitivity 95% (40/42) (95%CI 84-99), and specificity 100% (64/64) (95%CI 94-100). There were no adverse events.

Conclusion: The Heliprobe ^{14}C -UBT system is a very reliable, easy to use, near patient *Helicobacter* test which can best be used for test&treat in primary health care. It is extremely reliable in patients not taking acid suppressants