Cost Effective Use of Rapid Urease Medium in Diagnosing \textit{H. pylori} Gastritis

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\textbf{Abstract:} Three methods were compared for the detection of \textit{Helicobacter pylori} related disease in the GI tract.

Following endoscopic biopsy, two pieces of antral biopsy tissue were used in a CLO Test (Delta West Pty., Australia) and/or Rapid Urease Medium (Hardy Diagnostics). 100 urease results were compared to histology for specificity, sensitivity, time to result, and cost. We found minimal difference in the performance of the CLO Test and the Rapid Urease Medium; both had urease activity in 100\% of the positive cases when compared to visualizing the \textit{H. pylori} organism on tissue stained with Dieterle stain. Both urease methods were negative in approximately 10\% of cases when the tissue showed only changes of chronic gastritis.

The average time for color change was 52 minutes with the CLO test and 75 minutes with the Rapid Urease Medium. Histologic test results took an average of 36 hours.

The Rapid Urease Medium was one third the cost of the CLO Test and minuscule when compared to the processing and reading of tissue.

In this study, the Rapid Urease Medium (Hardy Diagnostics) provided the most cost effective approach to a \textit{H. pylori} gastritis diagnosis.