DISCUSSION III

***Question:* What will happen if/when cheaper endoscopes become available—the small calibre transnasal endoscopes—which do not require the patient to be sedated? Will we need to test and treat? I am thinking of endoscopes that cost, say, US$10 each, which could be used in primary care.**

Dr Moayyedi: First of all, this technology is not yet available. I also find it hard to believe that an endoscope would ever cost as little as US$10, as the technology is still expensive, and it would be even more expensive if it were available to every primary care physician. Secondly, we can of course make endoscopy cheaper in our decision analysis; however, even if the cost of endoscopy goes below US$100, a test and treat strategy is still more cost effective.

***Question:* Due to the fact that so many serological tests are less than 90% sensitive and specific, as well as the reduction in the prevalence of *Helicobacter pylori* in many countries, should we abandon serology and use only a breath test for the test and treat strategy?**

Professor Axon: We require a non-invasive way to detect *H pylori* with 98% accuracy at reasonable cost. If we can make the breath test cheaper (and I can see no reason why we cannot do this) or if we make serology more accurate, either would be appropriate.

***Question:* Dr Moayyedi, in some decision analyses and, particularly, in decision analyses with children, the test and treat strategy is not really cost effective. What is your view on this?**

Dr Moayyedi: I think to a certain extent you are correct. The cost effectiveness of a test and treat strategy depends on the prevalence of *H pylori* in the population. In the paediatric population, the prevalence of *H pylori* is very low. Therefore, in children in the developed world, a test and treat strategy may not be the most appropriate strategy. However, endoscopy is particularly difficult in this group and for that reason you might consider the test and treat strategy.

Professor Talley: What is the threshold *H pylori* prevalence in the population that makes a test and treat strategy more cost effective than endoscopy? For example, in countries such as New Zealand, the prevalence of *H pylori* in the general population is less than 10%; in Australia, the prevalence is generally below 20% although there are pockets of high prevalence.

Dr Moayyedi: The cut off is around 20% *H pylori* prevalence. Above this, a test and treat strategy under most circumstances is cost effective. Below this, a test and treat strategy starts becoming less cost effective but endoscopy is very expensive in Australia, for example. With a *H pylori* prevalence of below 10%, a test and treat strategy is not cost effective except in places where endoscopy is really expensive.

***Question:* Not all placebos are actually placebos—some work has shown that one of the constituents of many antacids has an MIC value that is the same as that for clarithromycin! Indeed, in peptic ulcer studies comparing cimetidine with antacids as a placebo, the antacids in fact were very potent anti-*H pylori* agents. I would therefore ask the faculty to be rather cautious as to what goes into placebos—it is not quite that straightforward. Was there any active component in your placebos used in the recent functional dyspepsia studies?**

Professor Talley: Not to my knowledge but this is an interesting observation.

***Question:* Professor Jones, you said that empiric antisecretory therapy works in primary care and that it is superior to placebo, based on the results from trials. However, at the end of your presentation you said that you did not advocate this treatment for any length of time in primary care. Therefore, what should we use, how long should we treat, what are the dangers of continuing treatment, and what are your concerns?**

Professor Jones: A lot of people seen in primary care have self limiting dyspeptic symptoms so they are not going to need long term therapy. There is also concern about using expensive drugs when you are not sure of the diagnosis. I recognise that we have been obsessed by the need to visualise the upper gastrointestinal tract over the last 20 years. However, it is helpful to know whether a patient has significant pathology and may require therapy over a long period of time. I think that performing an endoscopy is a good idea.

***Question:* In primary care we have been trying to implement various management guidelines, starting with the Maastricht guidelines, for eradication of *H pylori*[1] and then those from the European Society for Primary Care Gastroenterologists.[2] Please comment on the management strategies for *H pylori* positive functional dyspepsia in patients under the age of 45 years. Please also comment on why we should perform a trial of treatment on patients with potential gastro-oesophageal reflux disease (GORD) instead of testing for *H pylori*.**

Professor Jones: This is a moving target, and by the time we have answered the question the question may have changed. We have heard about changes in *H pylori* epidemiology, changes in technology, and changes in therapy, and I think that it is very difficult to make a statement today that is not site specific, healthcare system specific, or geographically specific. We are trying to create didactic European guidelines for primary care but it is a very difficult task.

***Question:* What should you do after you have tested and then treated a patient but the patient subsequently returns with symptoms? How likely is it that this will happen?**

Professor Axon: For patients who are *H pylori* negative or who have been made *H pylori* negative but who subsequently return with problems, my approach has been to retake the history. If the history suggests that they have GORD or dyspepsia, my policy has been to give them a proton pump inhibitor for one month to see how they get on. If this works, I then reassure the patient so that they know that they have nothing seriously wrong with them, and explain that the cause of their symptoms is too much gastric acid getting in the wrong place. I then stop proton pump inhibitor therapy after a month. In my experience, when we have eradicated *H pylori* most people do not have any symptoms or their symptoms have decreased to a level that they are happy with. If moderate-severe symptoms are still present, this usually points to GORD.

***Question:* Reassurance is necessary for the young patient (let us say below 45 years of age). However, if you tell a patient that he or she has dyspepsia, that you are not sure whether the treatment will relieve the symptoms, and also that he or she is *H pylori* positive, which may actually protect against gastro-oesophageal cancer, what is the reaction of the patient?**

Professor Axon: There is only one paper in the literature that has provided data to suggest that *H pylori* may protect against gastro-oesophageal cancer.[3] I think until more data are available it is difficult to accept this conclusion. However, we do know that *H pylori* causes distal gastric cancer and in some regions this is a serious problem. In these regions it would be unwise not to eradicate *H pylori* and we should also reassure the patient that the risk factor for the usual type of cancer has been dealt with.

***Question:* Metronidazole resistance in meta-analyses ranges from 10% to 95%, depending on the part of the world. Clarithromycin resistance appears to increase sixfold after treatment in patients in whom *H pylori* eradication therapy has failed. Amoxycillin resistance has now also been described. There are also some reports showing a number of non-*H pylori* associated duodenal ulcers in children. Finally, in the USA, for example, there are pockets of the population in which a high prevalence of *H pylori* infection exists. In your modelling studies, did you factor in the cost of antibiotic resistance and the fact that we do not know the natural history of *H pylori* infection when making the decision as to whether or not you should test and treat?**

Dr Moayyedi: Antibiotic resistance is an important problem. However, *H pylori* is actually quite a difficult organism to transmit. Therefore, even if you induce amoxycillin or metronidazole resistance in *H pylori*, it is unlikely to be transmitted to anyone else, so antibiotic resistance within an

organism is not particularly important. What is important I believe is the fact that indiscriminate use of antibiotics leads to resistance in other organisms in the normal orofaecal flora or otherwise. This is something that we have not modelled because it is impossible to assign any sort of cost to it. However, compared with what is happening in primary care at the moment, it is a drop in the ocean. Based on the amount of antibiotics prescribed in the UK each year, and assuming that a test and treat strategy is used in every patient presenting in general practice with dyspepsia, it makes absolutely no difference to the amount of antibiotics prescribed per year, to the third decimal place. This is because so many antibiotics are prescribed for everything else.

References

1 **The European Helicobacter Pylori Study Group**. Current European concepts in the management of *Helicobacter pylori* infection. The Maastricht Consensus Report. *Gut* 1997;**41**:8–13.

2 **Rubin GP**, Hungin AS. Guidelines for the management of *Helicobacter pylori* in primary care. *Digestion* 1998;**59**(suppl 3):428.

3 **Chow W-H**, Blaser MJ, Blot WJ, *et al*. An inverse relation between cagA strains of *Helicobacter pylori* infection and risk of esophageal and gastric cardia adenocarcinoma. *Cancer Res* 1998;**58**:588–90.