SOCIETY REPORT

WORKING PARTY REPORT OF THE GASTROENTEROLOGICAL SOCIETY OF SINGAPORE PART II – *HELICOBACTER PYLORI* AND NON-ULCER DYSPEPSIA IN SINGAPORE

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ABSTRACT

Non-ulcer dyspepsia (NUD) is a common symptom whose cause is currently unclear. Helicobacter pylori (H pylori) infection is found in half of all patients with NUD but other pathophysiological abnormalities eg delayed gastric emptying, have also been described. NUD patients with or without H pylori infection have identical symptom patterns and pathophysiological parameters. Studies on the efficacy of H pylori treatment in NUD give equivocal results to date. We therefore do not recommend treatment for H pylori in NUD.

Keywords: *non-ulcer dyspepsia, helicobacter pylori*

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INTRODUCTION

Non-ulcer dyspepsia (NUD) refers to persistent or recurrent upper abdominal pain or discomfort and may or may not be associated with other symptoms thought to arise from the gastrointestinal tract. The diagnosis of NUD requires that structural diseases eg peptic ulcer, reflux oesophagitis, gastric carcinoma, biliary tract disease as well as irritable bowel syndrome, be excluded[1,2]. Dyspepsia is a common symptom, up to 38% of subjects in the general population having experienced it in the preceding 6 months[3] but only a small proportion of these would have presented for medical attention. In population studies, positive serology for *H pylori* do not correlate with dyspeptic symptoms[4].

Various pathophysiological abnormalities of uncertain significance have been described for patients with NUD[1,2]. For example, approximately half of all subjects with NUD have delayed gastric emptying; 35%-50% of subjects have histological gastritis, usually due to *Helicobacter pylori (H pylori)*. The current view is that NUD is a heterogenous disorder, including multiple subsets of patients with different underlying pathophysiological mechanisms.

Patients with a documented history of peptic ulcer are not considered to have non-ulcer dyspepsia even after their ulcers have healed. In practice, this can be a problem since many dyspeptic patients presenting for endoscopy have already been on acid suppressant treatment. It is therefore possible that some of them have had peptic ulcers which were already healed by the time of endoscopy and get misdiagnosed as non-ulcer dyspepsia.

IS *H PYLORI* A CAUSE OF NUD?

H pylori is only found in at most half of all cases of NUD, so it cannot be the cause of all cases of NUD. It is theoretically possible that: (1) *H pylori* is the cause of all cases of *H pylori* positive NUD, (2) only a subset of *H pylori* positive NUD is due to *H pylori* infection, or (3) NUD is not caused by *H pylori* infection.

In patients with NUD and *H pylori* gastritis, a possible causal link can be explored in three ways:

a. Do *H pylori* positive patients with NUD have a particular pattern of symptomatology compared to *H pylori* negative NUD patients? If so, these symptoms may be due to *H pylori* infection and treatment for *H pylori* may be expected to benefit the same symptoms.

b. Within a population of NUD patients, is *H pylori* gastritis correlated with other pathophysiological abnormalities? If so, the possibility of a causal effect can again be explored

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and one subset of NUD patients evaluated for a possible response to treatment.

c. Patients with *H pylori* positive NUD can be treated for their *H pylori* infection and their symptomatic response studied. If *H pylori* infection is the cause of NUD, symptoms of NUD should improve after treatment.

Symptoms and pathophysiology of NUD in relation to *H pylori*

Non-ulcer dyspepsia patients with *H pylori* infection cannot be differentiated from those without *H pylori* infection on the basis of their symptom patterns[5]. This makes it unlikely that *H pylori* is the cause of all cases of *H pylori* positive NUD. Among a population of NUD patients, *H pylori* positivity does not correlate with gastric emptying, small intestinal transit, gastric acid secretion or any parameters other than histological gastritis[6]. Therefore, if one subset of NUD is indeed caused by *H pylori* infection, this subject cannot be identified at the present time.

Effect of treatment for *H pylori* in NUD

Many groups including some from Singapore and Malaysia have studied the effect of treatment of *H pylori* on the symptoms of non-ulcer dyspepsia. Although some of these studies found a benefit, others showed no difference[7]. The only published study to-date on the effect of *H pylori* eradication on the symptoms of non-ulcer dyspepsia showed no difference between subjects with persistent infection compared to those whose *H pylori* were eradicated at the end of treatment[8]. However, there was an advantage for the group with successful eradication after one year of follow-up[9].

All published studies to-date have methodological problems which make their data problematic to interpret. One major problem is the high response rate of symptoms of non-ulcer dyspepsia to placebo treatment or even to no treatment. Treatment of *H pylori* infection remains unsatisfactory in terms of efficacy, side effects and cost. No clear benefit has been demonstrated for the use of such treatment in functional dyspepsia. It is our consensus and that of others that the present state of knowledge on *H pylori* treatment is not routinely indicated in non-ulcer dyspepsia except in the context of a clinical trial[10].

CONCLUSION

In conclusion, current data do not support treatment for *H pylori* in the patient presenting with non-ulcer dyspepsia.

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