Helicobacter pylori and the learning disabled

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SUMMARY

Those with a learning disability previously cared for in institutions have now been discharged into smaller community homes. This has meant that an increased burden has been placed on general practitioners (GPs) to evaluate and treat those who have symptoms that may be difficult to interpret. This report presents the prevalence of Helicobacter pylori in those still awaiting discharge and discusses the possible symptoms that GPs may encounter.

Keywords: Helicobacter pylori; learning disabilities; gastrointestinal problems.

Introduction

Helicobacter pylori infection is one of the most common chronic human infections with a prevalence rate approaching 50% in the elderly.[1] The prevalence in industrialised and developing countries differs significantly with socioeconomic conditions being an important factor.[2] In the subgroup of people with learning disabilities in institutions, a high prevalence of between 80 and 90% has been recorded, regardless of the socio-economic conditions or country of origin.[1,3]

As clinicians working with those with learning disabilities, we were concerned about possibly related issues in this area:

1. The widespread use of proton pump inhibitors and anecdotal reports of improvement in behaviour as well as gastric symptoms.
2. The relatively high number of deaths due to gastrointestinal cancer in institutions.[5,6]
3. The increasing number of reports in the medical press linking *H. pylori* to non-gastroenterological problems.[4]

The movement of long-stay patients from institutional to community care shifts the onus of diagnosis and management of *H. pylori*-related problems from the learning disability services to general practitioners (GPs). The authors share a belief that there are *H. pylori*-related symptoms in the learning disabled that are being missed. To evaluate this it is necessary to determine the prevalence of infection in this population.

Methods

Patients

Annual health checks are still performed in some residential units directly managed by the health service. These reviews include a physical examination and venous sampling for drug levels as well as common metabolic or haematological disorders; for example, hypothyroidism and anaemia. An *H. pylori* antibody assay was added for those patients due for a health check screen. The local research committee were informed of this proposal and agreed that formal consent was not required.

Methods

Two different laboratories were used for the serum analysis. The Public Health Laboratory Service in Gloucester processed samples collected in Bristol and Gloucester; using the Meridian Diagnostics Inc. premier *H. pylori* microwell-based enzyme immunoassay. Equivocal results were reprocessed via the Sigma Diagnostics immunoassay *Helicobacter pylori* kit (HM-CAP ™).

Those samples collected in Cheltenham were processed through the microbiology laboratory at Cheltenham General Hospital where the Sigma Diagnostics immunoassay *Helicobacter pylori* kit (HM-CAP ™) is also used.

Both tests have been previously validated and show a sensitivity of 93.6% to 97.6% and specificity of 94.1% to 95.5%. These laboratories accept that a positive test result denotes active infection unless previous triple therapy eradication has been prescribed.

Results

Between July 1998 and July 1999 110 patients received annual health evaluation, 73 (66.36%) were male and 37 (33.64%) were female. The patients showed a wide age range from the youngest aged 15 years, to the oldest aged 93 years, the median age was 54.5 years. Of the 110, 101 (91.82%) tested positive for *H. pylori* IgG antibodies. Of the nine who tested negative, seven were male and two female; their ages ranged from 15 to 67 years (median 47 years). There was no significant difference between the two laboratories used.

Discussion

There has been substantial research into the associations and effects of *H. pylori*. At present this common infection poses many conundrums. There is speculation on the virulence of the specific strains, on genetic predisposition to infection, and on the combined effects of infection and dietary factors; further research continues to fuel the debate. There is concern that treatment could, in itself, cause a problem; *H. pylori* eradication has been associated with an increase in cancer of the gastro oesophageal junction and worsening gastro oesophageal reflux. The appropriate management of *H. pylori* seropositivity is still unclear; most guidelines suggest eradication for those presenting with peptic ulcer disease or severe gastrointestinal symptoms. In those with a learning disability this may be difficult to evaluate.

Physical symptoms in those who are not able to communicate are difficult to interpret and may be expressed atypically through

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irritability, inactivity, loss of appetite, or sleep disturbance. Some challenging behaviour could therefore be a communication of gastrointestinal symptoms secondary to unrecognised *H. pylori* infection.

H. pylori infection is associated with gastric carcinomas and the high prevalence in this study (91.82%) may explain the previously reported increased number of deaths due to gastrointestinal carcinoma.[5,6] This may be an important consideration when evaluating the health impact of *H. pylori* infection in this particular population.

Distant conditions (migraine, cerebrovascular disease, and coronary artery disease) have increasingly been associated with *H. pylori* infection. These effects are thought to be mediated through an inflammatory response or through production of vasoactive peptides.[4] Epilepsy is a common disorder in those with a learning disability; it is worsened by many factors including tiredness, anxiety, and physical illness. Could chronic *H. pylori* infection have a bearing on the seizure frequency of those with epilepsy?

With the move from institutional to community care there will be an increased burden on GPs to evaluate physical symptoms in those with a learning disability. Although this report highlights a high prevalence on serological testing there is no accompanying evidence (urea breath test or endoscopic evaluation) to confirm the diagnosis. Both the urea breath test and endoscopy are difficult to perform in those with a learning disability and so achieving a comprehensive picture may prove difficult.

Until further research establishes whether there is an association between *H. pylori* eradication and improvement in challenging behaviour, epilepsy or sleep disturbance we propose that when evaluating someone with a learning disability who has previously lived in an institution, the possibility of *H. pylori* causing distress should be considered.

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