Audit of Pneumococcal Vaccination in Coeliac Disease Patients in a London Teaching Hospital Database

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Introduction

Coeliac Disease affects 1-3% of the UK population. Established complications of coeliac disease include orthopaedic fracture and lymphoma. Until recently the risk of pneumococcal infection has been described only in case reports and it is thought that hyposplenism is the most likely mechanism for this. An editorial in Gut from 2008 suggests that the overall risk of pneumococcal infection in coeliac patients exceeds that of the more established complications such as orthopaedic fracture and lymphoma (Fig 1).

The British Society of Gastroenterology (BSG) guidelines from 2002 recognise that “patients with CD invariably have a degree of hyposplenism for which immunisation with pneumococcal vaccine may be undertaken”.

Aims

This study aimed to investigate the uptake of pneumococcal vaccination in a group of coeliac patients and to investigate whether current national guidelines are being adhered to.

Methods

Coeliac disease patients were identified from a London teaching hospital clinical database. A web based survey (www.imperial.ac.uk/medicine/Giresearch) was set on the Imperial College website up to allow reporting of vaccination status by local General Practitioners (GPs).

Results

170 coeliac patients were identified from the clinical database and all GPs were sent a letter inviting participation in a study.

42 (24.7%) complete responses were submitted through the Imperial College web site.

22 (52.3%) of these responding GPs reported past pneumococcal vaccination of the coeliac disease patient under their care.

Discussion

A previous report of pneumococcal vaccine uptake suggests coeliac disease patients represent one of the lowest levels of vaccine uptake for a group at risk of pneumococcal infection. In this study, the uptake was particularly poor in patients between the ages of 5 and 65 years, where no age group exceeded 20% uptake.

As a point for comparison, this study finds a 22.2% overall uptake of vaccination for patients between the ages of 5 and 65, much higher uptake than that previously described (See Fig 2). However, this still represents a poor level of vaccine uptake.

Conclusions

This study suggests that pneumococcal vaccination for at risk coeliac disease patients is not being well applied within the community, despite national guidance.

Low vaccination is perhaps unsurprising considering the vague nature in which the BSG guidelines have been written. This vagueness is most likely attributable the evidence base on which they were written in 2002.

With new and better evidence of pneumococcal infection risk in coeliac disease patients and considering its potential impact, it seems that national guidelines need to be reassessed.

After the guidelines have been rewritten, re-audit of uptake would be appropriate. At this time assessment of the efficacy of pneumococcal vaccination with the current Pneumovax II in coeliac patients also seems appropriate. Considering the mechanism of action of the Pneumovax II via T cell independent antibody production, which is reliant upon splenic function known to be decreased in coeliac patients, a clinical trial comparing current Pneumovax II with the alternative polyconjugate vaccine, currently licensed for use in children only but un-reliant upon splenic function, may also prove useful at this time.

References