H.Pylori IgG Antibodies in Children

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Abstract

Objective: The aim of the study was to see the exposure rate to H. Pylori (lgG) in apparently healthy children.
Methods: Serum samples of 100 apparently healthy children aged 6 months to 10 years were screened for IgG antibodies against H.pylori using Abbott's flexpack kit. Children were divided into two groups, group I included aged 6 months to less than 5 years and group II aged 5-10 years.
Results: Of 60 children in group I, 17 (28.3%) showed antibodies against H. Pylon indicating exposure. The exposure rate was 12.5% between 6 months to 11 months, 28.5% in 12 months to 23 months and 38% in 24-36 months. Exposure rate increased with lowering of socioeconomic status; being 13.3% in upper, 26.9% in middle and 42.1% in lower socioeconomic group. Of 40 children aged 5 years to 10 years, 16 (40%) showed H. Pylon antibodies. The exposure rate was 34.3% at 5 years and increased to 62.5% in those aged 8-10 years. The H.pylori positivity was 33.3% in upper and middle socioeconomic group and 62.5% in lower socioeconomic group. Over all exposure rate to H. Pylori in children was 33%.
Conclusions: H.pylori exposure rate increased with the advancement of age and lowering of socioeconomic status. Early exposure might be related to the use of premasticated food by the mothers for feeding of children; dental plaque being the reservoir of infection in adults (JPMA 49:143, 1999).

Introduction

Epidemiological data from USA shows a 31% prevalence of H. Pylori infection in asymptomatic healthy children aged 3-20 years[1]. Acquisition of infection increases with age, in blacks and in those belonging to lower socioeconomic group[2].
Seroepidemiological data suggests that the prevalence of H. Pylori infection in early childhood may not follow a single monotomic progression[2]. Several reports indicate that H. Pylon plays a role in recurrent abdominal pain in children and adolescents[3] whose frequency varies from 63% in French children[4] to 17 % in USA[5], 54% in Israel[6] and 67% in Ireland[7]. Serological diagnosis using ELISA is 95% sensitive and 92% specific[8] and urea breath test 98% specific[9]. Flex pack HP (Abbott Laboratory) which tests serum IgG antibodies to H. Pylon has a 93% sensitivity and 90% specificity when compared with urea breath test and a 94% specificity when compared with EIA (leaflet information) Abbott In the present study the positivity of H. Pylori was checked in the serum samples of children using fiexpack kit (Abbott).

Subjects, Methods and Results

Blood samples from 100 children aged 6 months to 10 years were collected which included sixty samples from children aged 6 months to less than 5 years and 40 from school going children aged 5-10 years of age.

Table 1. Frequency of H. Pylori according to age (6 months to under 5 years).

Age Group	No.	H. Pylori Positive No.	%
6-11 months	16	2	12.5
12-23 months	14	4	28.5
24-36 months	29	11	37.9
36-60 months	1	0	00.0
Total	60	17	28.3

Sampling was done from schools belonging to upper, middle and lower socioeconomic group. Socioeconomic status was calculated from the location of the school, monthly income of the family, number of dependents, number of rooms and toilets in the house of the selected child.

Table 2. Frequency of H. Pylori according to socio economic status (Age 6 months to under 5 years).

Socio Economic Status	No.	H. Pylori Positive No.	%
Upper	15	2	13.3
Middle	26	7	26.9
Lower	19	8	42.1
Total	60	17	28.3

Children with a total family income of less than Rs 5000 were classified as those belonging to lower socioeconomic group,

Table 3. Frequency of H. Pylori according to Age (5 -10 years).

Age Group	No.	H. Pylori Positive No.	%
5 years	32	11	34.3
8-10 years	8	5	62.5
Total	40	16	40.0

those with a total income ranging between Rs 5000-15,000 as middle and those with an over 15,000 income as upper socioeconomic