

# Epidemiology of Pediatric Gastroenterology in a Referral Hospital of Colombia

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## Summary

We analyzed 2788 interconsultation of pediatric gastroenterology according to a unique period (January 1997 - December 2006) and in two periods (A=1997-2001 Vs B=2002-2006), in relation to type of pathology, evolution (acute Vs chronic) and etiology (infectious Vs not infectious). *Results:* There were not big differences in the two periods, with the exception of malnutrition, necrotizing enterocolitis and chronic diarrhea which were in the period A and not in the period B; meanwhile in the period B there was an increment of peptic acid disease and constipation and appear irritable bowel syndrome (IBS). We found that chronic and not infectious diseases were more frequent in both periods. *Conclusion:* This study shown a decline in infectious diseases but increased incidence of constipation, acid peptic disease and IBS in the second period.

## Introduction

In the last ten years, it has observed a transformation in the gastrointestinal epidemiological profile of the pediatric population worldwide. Most of the infection diseases like diarrheas have been disappeared and diseases like inflammatory bowel diseases, constipation, food allergies and irritable bowel syndrome have been incremented. Taking this record in mind, the aim of this study was to know what happen in our daily gastroenterology practice in one pediatric hospital of South America, specifically to revise the epidemiological

behavior of the gastrointestinal pathology in our pediatric population served and contrast it with the worldwide literature's findings.

## Material and methods

A retrospective and descriptive study was made between January 1997 and December 2006 in which we collected only data from the files of interconsultation kept into the Pediatric Gastroenterology, Hepatology and Nutrition Department Unit of Clínica del Niño. There were 2955 interconsultation gathered, where 167 were excluded because the data were incomplete. Thus, a total of 2788 interconsultation were included and we reviewed the following variables: gender, diagnostic and date of interconsultation. We could not include data about age and origin of the patients because they were not registered in all the files of interconsultation.

The pathologies were classified according to the evolution (acute-chronic-neither of them) and depending on the main cause (infectious-not infectious-neither of them).

We analyzed the data as a unique group and by gender (1997-2006) and also it was compared according to gender in two periods of 5 years each (period A: 1997-2001, period B: 2002-2006).

Patients were registered in a database in Excel and the statistics analysis was performed using absolute frequencies and percentages (%).

## Results

In the total sample according to the gender distribution, there were not big differences (females 53%, males 46% and no data 1%) even less if the patients were separated in two periods (Figure N° 1).

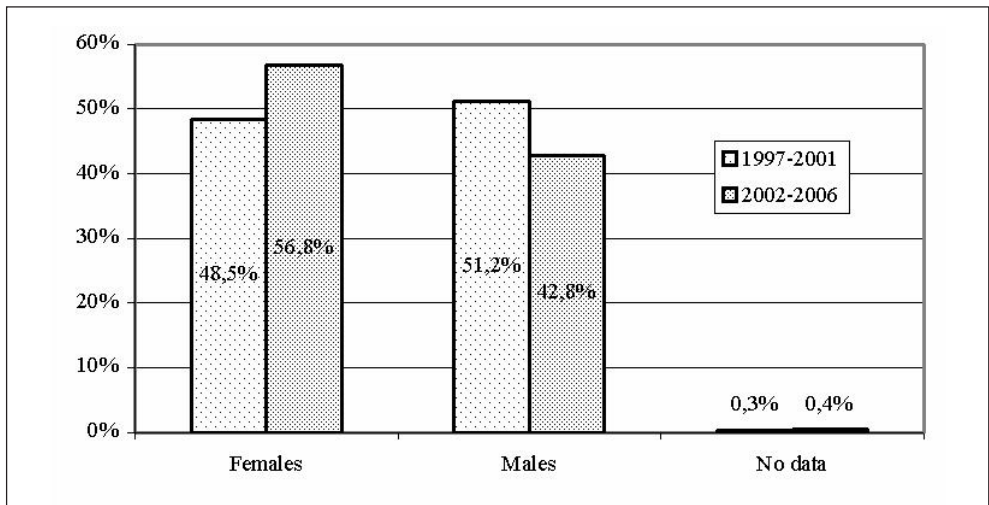


Figure No. 1. Distribution of gastroenterology interconsultation by gender in two periods.

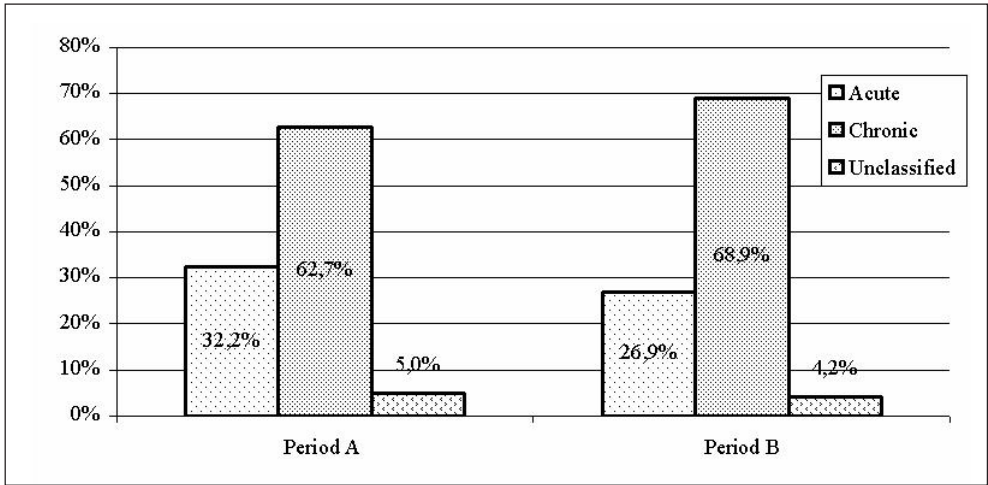


Figure No. 2. Trend in evolution of disease of two periods (A: 1997-2001, B:2002-2006).

The first 10 causes of consultation which covered 66 percent (%) of the total analyzed sample were in order of importance: peptic acid disease, constipation, upper gastrointestinal bleeding, recurrent abdominal pain, gastroesophageal reflux disease (GERD), chronic diarrhea, acute diarrhea, acute hepatitis, Cystic Fibrosis and gastrointestinal tract burn (data not shown).

Comparing these ten first causes according to two periods of observation (A:1997-2001 vs. B: 2002-2006), there were not big differences, with the exception of malnutrition, necrotizing enterocolitis (NEC) and chronic diarrhea which were in the first period and not in the second one; meanwhile in the second period there was an obvious increment of peptic acid disease and constipation and appear irritable bowel syndrome (Table 1).

Table No. 1. First 10 causes of interconsultation in two periods.

| Period A: 1997 -2001        | %  | Period B: 2002 -2006        | %  |
|-----------------------------|----|-----------------------------|----|
| Acid peptic disease         | 13 | Acid peptic disease         | 24 |
| Chronic diarrhea            | 7  | Chronic constipation        | 14 |
| Recurrent abdominal pain    | 7  | Upper GI hemorrhage         | 7  |
| GERD                        | 7  | Recurrent abdominal pain    | 5  |
| Upper GI hemorrhage         | 7  | Acute diarrhea              | 4  |
| Necrotizing enterocolitis   | 5  | Acute hepatitis             | 4  |
| Chronic constipation        | 5  | GERD                        | 4  |
| Cystic fibrosis             | 5  | Irritable bowel syndrome    | 4  |
| Acute diarrhea              | 4  | Chronic diarrhea            | 3  |
| Protein-Energy Malnutrition | 4  | Gastrointestinal tract burn | 3  |
| n=757                       |    | n=1133                      |    |

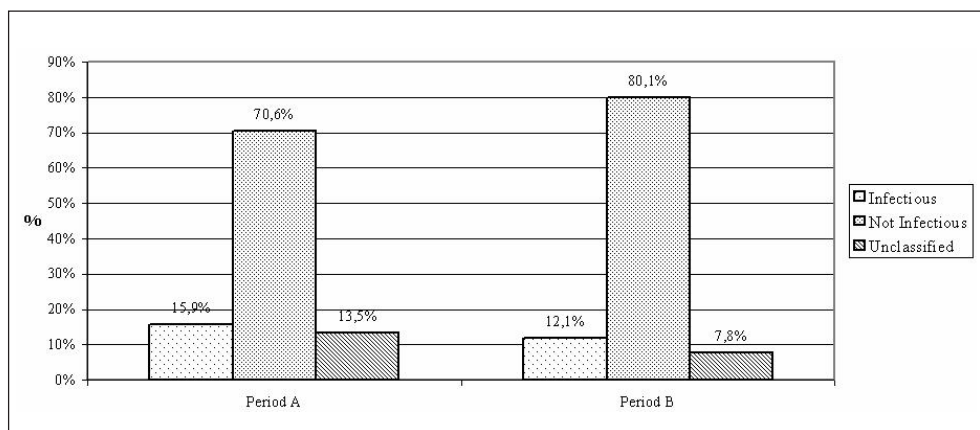


Figure No. 3. Distribution of interconsultation according to infectious and not infectious diseases in two periods (A: 1997-2001, B: 2002-2006).

When we gathered the pathologies in acute and chronic, we found that the chronic diseases were more frequent in both periods (Figure N° 2).

To categorize the pathologies in infectious and no infectious diseases, we found predominantly not infectious diseases in both periods although higher in the period B (Figure 3).

## Conclusion

In this study between 1997 and 2006, we had found a decline in infectious diseases but increased incidence of constipation, acid peptic disease and irritable bowel syndrome to the second part of it (2002-2006).

In general terms, though a certain change could be observed in the epidemiological profile, specifically when we compared the two periods, it has not been completely subscribed to worldwide trend characterized by a descent in infectious pathology and a greater incidence in intestinal inflammatory disease, food allergies, celiac disease, gastroesophageal reflux, eosinophilic diseases, obesity and constipation.

It is important to conduct a second phase of this study including data such as age and origin of the patients to complete gastrointestinal epidemiological behaviour of our pediatric population.

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