Characterization of Crohn’s disease patients in Maringá region

Pedrina Gonçalves Vidigal
Sidney Edson Mella Junior

Abstract
Crohn’s disease is characterized by chronic inflammation of the gastrointestinal tract, and its source of manifestation has not been clarified yet. Thus, the present work had as objective to describe Crohn’s disease patients in Maringá region - Paraná state, and also, to describe their social, demographic and clinic characters as well. Seven patients with Crohn’s Disease, diagnosed on the basis of accepted clinical, radiological, endoscopic, and pathologic criteria, and resident in the studied area, were recruited from ABCD centre in Maringá, Paraná State, Brazil. Patients were asked to fill up a standardized survey including questions related to demographic, social and clinical issues. Approximately 71.428% of patients were Caucasian, being 57.142% of them Italian descendants, and apparently without Jewish inheritance. Nobody presented inflammatory bowel diseases heritage or either smoking habit. The terminal ileum was the portion of the gastrointestinal tract more affected, corresponding to 71.42% of the patients. Clinical and demographic characteristics were similar to previous studies, aside from the patients that weren’t tobacco user and did not present Jewish heritage.

Keywords: Crohn’s disease- Epidemiology; Ileitis; Inflammatory bowel disease.

INTRODUCTION

Crohn’s disease (CD) and Ulcerative colitis (UC) are the main chronic disorders related to inflammatory bowel disease. Enteritis, another nomination for CD, is characterized by chronic inflammation of the gastrointestinal tract (AUTSCHABACH et al., 2005) of unknown aetiology yet (AUTSCHABACH et al., 2005; GASCHE; GRUNDTNER, 2005; SOUZA et al., 2002). In general, the major causes of this disease are environmental, immunological and genetic factors, as demonstrated by several studies (AUTSCHABACH et al., 2005; BRIDGER et al., 2002; FIOCCHI, 1998; KARBAN et al., 2004; LOGAN; KAY, 1989; MOLINIÈ et al., 2004; YANG et al., 1993). In addition, suffered stress can also influence for the development of this pathology. (MAWDSLEY; RAMPTON, 2005) Even though it has been only observed in developed countries (STANGE et al., 2006), inflammatory bowel diseases, such as Crohn’s Disease (CD) and Ulcerative Colitis (UC), are responsible for a serious worldwide health problem. The main reason for this is due to frequent relapses and severe clinic symptoms affecting especially young people (SOUZA et al., 2002). Thus, the increasing incidence of Crohn’s disease has attracted attention from several health professionals, in order to develop effective prevention and control methods for this pathology (MOLINIÈ et al., 2004; STEINWURZ, 1999). Beyond that, according to Associação Brasileira de

1  PICC Biomedical Undergradute. Centro Universitário de Maringá – CESUMAR, Maringá-PR.
2  MSc. Professor Biological Science - Pharmacy Department - Centro Universitário de Maringá – CESUMAR.

Correspondência para / Correspondence to:
CEP: 87080 -100 Maringá- PR - Brasil.
E-mail: pedrinagv@hotmail.com.
Colite Ulcerativa e Doença de Crohn (ABCD), there are not yet precise incidences of this pathology in Brazil. Although, it has a population of approximately 330,000 inhabitants, Maringá is the only non capital city in Brazil that presents one of these ABCD centers.

Therefore, our objective was to characterize Crohn’s disease patients in Maringá city - Paraná state, and also, to describe their social, demographic, developed clinic characters.

MATERIAL AND METHODS

Seven patients with Crohn’s Disease, diagnosed on the basis of accepted clinical, radiological, endoscopic, and pathologic criteria, and resident in the study area, were recruited from ABCD centre in Maringá, Paraná State, Brazil. The study protocol was approved by the Committees for Ethical Issue at Associação Brasileira de Doença de Crohn e Colite Ulcerativa and Centro Universitário de Maringá (Comitê de Ética Permanente em Pesquisa - COPEC) as well. Only patients registered at the Associação Brasileira de Doença de Crohn e Colite Ulcerativa (ABCD) that attended the meetings during the period from January 2007 to August 2007, and demonstrated desire to participate on this study, by signing a written informed consent, were included (n=7).

In order to collect the data, patients were asked to fill up a standardized survey including questions related to demographic, social and clinical issues.

Demographic and social aspects included information about gender, age, race, marital status (single, married or divorced), origin (rural zone or urban zone) and tobacco consumption before and after the occurrence of the disease. The patients who had smoked at least 7 cigarettes per week for at least one year at anytime of their life were considered smokers.

Meanwhile, for clinical manifestation, the presence of symptoms, such as chronic diarrhea; constipation; intestinal cramps; perianal fissure; fistula; abscess; fever; weight loss; stenosis; abdominal mass; and extraintestinal features involving eyes, joints, skin, was evaluated. In addition, gastrointestinal inflammatory bowel disease (IBD) inheritance in a first cousin or more closely related relative, and disease location were also investigated. Besides that, unusual events, such as hospitalization, surgery and use of medication that referred to clinical evolutions were also appraised. Therefore, data analysis and graphics were performed and designed by using Microsoft Excel Program.

RESULTS

Social-demographic characteristics demonstrated that most patients were women (FIGURE 1), married (71.428%) and presented a mean age estimated at 37.35 years. It was observed that, approximately, 71.428% were Caucasian and apparently nobody was Jewish descendant. In addition, 57.142% of them presented urban side origin and were Italian descendents. None of them presented inflammatory bowel diseases heritage or either smoking habit.

In relation to clinical features Figure 2 shows that the most reported ones were abdominal pain (57.142%), chronic diarrhea (57.142%) and abdominal mass (42.857%), followed by weight loss (38.571%) and fistula (38.571%). Aside from the characteristics cited, only a patient presented also a stricturing disease. In addition, another patient, who reported symptoms as chronic diarrhea and abdominal pain, had also demonstrated an ophthalmologic complication.

On the other hand, it was shown that the terminal ileum was the portion of the gastrointestinal tract more affected, corresponding to 71.42% of the patients (FIGURE 3).

Even only one was just treated with antibiotics, the majority of patients, approximately 85.714% (n=6), received some kind of corticosteroid treatment (FIGURE 4). A number of these patients, 57.142% (n=4), could fit corticosteroid dependent condition according to Stange and others (2006).

Meanwhile, an association of aminosalicylate and immunosuppressant medication had been shown in 57.142% (n=4) of them. Beyond that, a patient was treated with the combination of antibiotics (sulfa) and corticoid (prednisone).

According to Table 1, all involved patients had been hospitalized at least once, and 57.142%
Table 1 – Distribution of hospitalization, surgery and transfusion reported by patients at Associação Brasileira de Colite Ulcerativa e Doença de Crohn de Maringá, Maringá – Paraná, Brazil.

<table>
<thead>
<tr>
<th>Variable</th>
<th>CD (n=7)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitalization</td>
<td>7</td>
<td>100</td>
</tr>
<tr>
<td>Surgery</td>
<td>4</td>
<td>57.142</td>
</tr>
<tr>
<td>Transfusion</td>
<td>3</td>
<td>42.857</td>
</tr>
</tbody>
</table>

of them had to undergo surgery. Besides that, 42.857% of them needed blood transfusion.

DISCUSSION

Normally, CD affects individuals at the age from 20 to 30 (MOLINIEL et al., 2004) that are Caucasian and also female (HANAUER; SANDBORN; PRACTICE PARAMETERS COMMITTEE OF THE AMERICAN COLLEGE OF GASTROENTEROLOGY, 2001; JAFRI; PASRICH, 2003). Women are probably more affected due to association between use of oral contraceptives and genetic and/or immunologic susceptibility. The using of oral pills could lead to a possible vascular lesion basis resulting in ischemic intestinal tissue, which explains the high incidence of this disease in women (LOGAN; KAY, 1989). Even though, studies about gender predominance in CD are not uniform, it is considered a disease with relatively homogenous distribution either in women or men (ANDRADE et al., 2005).

Smoking is considered an external trigger for Crohn’s Disease (GASCHE; GRUNDTNER, 2005), thus, it increases the likelihood of needing surgery. According to Bridger and others (2002), a population of familial patients that presented smoking habit was positively associated with Crohn’s Disease. Nonetheless, this cohort had only non-smoker patients.

Several studies have reported a higher incidence and prevalence rate of IBD in Jewish population, especially the Ashkenazi group when compared to their non-Jewish neighbors (KARBAN et al., 2004; YANG et al., 1993). However, in this study there was not any Jewish heritage report.
Hence, it is probable that the present cohort carries one or more susceptibility genes that associated with environmental risk factors are capable to set off the disease.

Chronic diarrhea, when the stool decreases its consistency for more than six weeks, is known as the most common symptom (57.142%) of Crohn’s disease (STANGE et al., 2006). Additional, abdominal pain, abdominal mass, weight loss, perianal fistulas and abscesses are also symptoms that characterize this pathology (HANAUER; SANDBORN; PRACTICE PARAMETERS COMMITTEE OF THE AMERICAN COLLEGE OF GASTROENTEROLOGY, 2001). Usually, weight loss, chronic and/or nocturnal diarrhea, abdominal pain and anal bleeding reflect the evolution of the inflammatory process (FIOCCHI, 1998). According to Stange and others (2006), approximately 70% of patients have intestinal abdominal pain; similar data was also observed in this work. Extra intestinal manifestations include ophthalmologic, articular, dermatologic, hepatobiliar, and thromboembolic problems.

The most commonly compromised sites are the ileum and colon (FARMER; WHELAN; FAZIO, 1985; MEKHJIAN et al., 1979) usually complicated by intestinal obstruction, inflammatory mass or abscess. Molinè and others (2004) and Louis and others (2001) have also found and published similar data, which were also in agreement with the present work.

Mesalazine (ASA) is an aminosalicylate that was often used to treat inflammatory bowel diseases because of its local actions (JAFRI; PASRICHA, 2003). However, recently, some studies had revealed that mesalazine was not as effective as placebo for treatment of ileal and colonic activity in CD (FEAGAN, 2004; TRAVIS et al., 2006). On the other hand, azathioprine (AZA) is an immunosuppressive of second line for treatment for CD patients in severe category or yet those ones that are resistant or dependent on steroids (PEARSON et al., 1995). Further, Pearson and others (2000) observed that azathioprine not only presents positive effects to maintain CD remission, but also points out the capacity to save and reduce the necessity of steroids to take care of patients. Although, Campbell and Ghosh (2001) demonstrated that relapse rates of inflammatory bowel diseases (Ulcerative Colitis and Crohn’s disease) were not reduced by concurrent use of 5-aminosalicylate in patients under azathioprine therapy, in a 30 year review period.

In relation to surgeries, the main reason consists yet on complications during the disease course, such as intestinal obstruction and stenosis (COSNES et al., 2005). Therefore, surgeon and patient must consider risk factors and complications, considering that medical treatment should optimize an individual’s quality of life.

CONCLUSION

In conclusion, clinical and demographic characteristics were similar to previous studies, aside from the patients that weren’t tobacco and did not present Jewish heritage. This study is in agreement with previous data, since most affected patients were the young. Since young people consist on economical active population of job market, it is natural that medical community has been working hard in order to provide better treatments and also prevention. Even though, medical therapy has the intention to get the patient well, usually they imply in big expenses. However, if there is any medication that prevents future hospitalizations and surgeries, then they should be used to benefit the patient.
doença de Crohn, diagnosticados com base em critérios clínicos, radiológicos, endoscópicos e patológicos devidamente aceitos, residentes na área de estudo, foram recrutados no centro ABCD em Maringá, Estado do Paraná, Brasil. A fim de coletar os dados, foi requerido aos pacientes que respondessem a um questionário padronizado, o qual incluía perguntas relacionadas às questões demográficas, sociais e clínicas. Aproximadamente 71,428% dos pacientes eram caucasianos, sendo que 57,142% deles apresentavam descendência italiana, sem vestígio de herança judaica. Além disso, nenhum dos pacientes relatou histórico familiar de doença inflamatória intestinal ou ainda hábito de fumar. A porção do trato gastrointestinal mais acometida observada nos pacientes foi a do íleo, correspondendo a 71,42%. As características clínicas e demográficas observadas foram semelhantes a estudos prévios. No entanto, nenhum paciente era fumante e, aparentemente, não apresentavam ascendência judaica.

Palavras-chave: Doença de Crohn- Epidemiologia; Ileíte; Doença inflamatória intestinal.

REFERENCES


**Acknowledgments**

*We thank the patients who participated in this study, Dr. Aline Satie Oba Kuniyoshi who contributed for data collection, and Andressa Gonçalves Vidigal for critical review.*

Received 16/10/2008
Accepted 17/11/2008