

Epidemiological evolution of epidemiology of the inflammatory bowel diseases in a hospital of Tunis

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Evolution de l'épidémiologie des maladies inflammatoires chroniques de l'intestin dans un centre hospitalier de Tunis

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LA TUNISIE MEDICALE - 2013 ; Vol 91 (n°01) : 70 - 73

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R É S U M É

Prérequis : Les études épidémiologiques ont montré que l'incidence des maladies inflammatoires chroniques de l'intestin décrit un gradient Nord-Sud. Par ailleurs, concernant l'évolution selon le temps, des études récentes ont noté une augmentation de l'incidence de la maladie de Crohn aux dépens de celle de la rectocolite hémorragique.

But : Estimer l'évolution de l'épidémiologie des maladies inflammatoires chroniques de l'intestin selon le temps à partir du nombre de cas diagnostiqués au service de Gastro-entérologie de l'hôpital Habib Thameur.

Méthodes : Il s'agit d'une étude rétrospective incluant les patients hospitalisés et suivis pour maladie de Crohn, rectocolite hémorragique et colite indéterminée. Pour chaque patient nous avons recueilli le sexe, l'âge et l'année du diagnostic, le type de maladie inflammatoire chronique de l'intestin et la localisation initiale (iléale, colique, iléo-colique et proximale pour la maladie de Crohn, distale ou pancolitique pour la rectocolite hémorragique). Nous avons comparé l'évolution de la fréquence des maladies inflammatoires chroniques de l'intestin, leur type et leur localisation initiale selon 5 périodes de 3 ans.

Résultats : Durant cette période, 202 maladies inflammatoires chroniques de l'intestin ont été diagnostiquées (55,5% de maladie de Crohn, 41,5% de rectocolite hémorragique, 6% de colite indéterminée). Pour la première période, on notait 21 cas de MICI, pour la 5ème période, on notait 43 cas. La fréquence de la maladie de Crohn était passée de 8 cas pour la 1ère période à 23 cas pour la 5ème. La fréquence de la rectocolite hémorragique était passée de 12 cas pour la 1ère période à 17 cas pour la 5ème. Le nombre de cas de colite indéterminée était de 1 pour la 1ère période pour passer à 3 pour la 5ème. Ces différences n'étaient pas significatives. La répartition des localisations initiales de la maladie de Crohn et de la rectocolite hémorragique a augmenté de façon proportionnelle pour chacune des périodes. L'âge moyen au diagnostic était de 32 ans pour la 1ère période et de 35 ans pour la 5ème période et comparable quel que soit le type de maladie inflammatoire chronique de l'intestin MICI.

Conclusion : Bien que l'on ne puisse chiffrer l'incidence, on note une augmentation de la fréquence des maladies inflammatoires chroniques de l'intestin, avec une élévation plus marquée pour la maladie de Crohn.

Mots-clés

Maladies inflammatoires chroniques de l'intestin ; maladie de Crohn ; rectocolite hémorragique ; épidémiologie.

S U M M A R Y

Background: The epidemiological studies showed that the incidence of the inflammatory bowel diseases describes a gradient North-South. Besides, concerning the evolution according to the time, recent studies noted an increase of the incidence of the Crohn's disease at the expense of the one of the ulcerative colitis.

Aim: To determine the evolution of the epidemiology of the inflammatory bowel diseases across the time.

Methods: The study included inpatients followed for Crohn's disease, ulcerative colitis and indeterminate colitis, in the department of gastroenterology of Habib Thameur hospital. For every patient were collected the sex, the age and the year of the diagnosis, the type of inflammatory bowel disease and the initial location. We compared the evolution of the frequency of the inflammatory bowel diseases, their type and their initial location according to 5 periods of 3 years.

Results: During this period, 202 cases of inflammatory bowel disease were diagnosed (55,5% of Crohn's disease, 41,5% of ulcerative colitis, 6% of indeterminate colitis). For the first period, we noted 21 cases of inflammatory bowel disease, for the 5th period, we noted 43 cases. The frequency of the Crohn's disease passed from 8 cases in the 1st period to 23 cases in the 5th one. The frequency of the ulcerative colitis passed from 12 cases in the 1st period to 17 cases in the 5th one. The number of indeterminate colitis was 1 in the 1st period and 3 in the 5th one. These differences did not been significant. The distribution of initial locations of the Crohn's disease and the ulcerative colitis increased in a proportional manner for each period. The average age to the diagnosis was 32 years in the 1st period and 35 years in the 5th period and comparable whatever the inflammatory bowel disease type.

Conclusion: Although we cannot amount the exact incidence, we noted an increase of the frequency of the inflammatory bowel diseases, with a more marked elevation for the Crohn's disease.

Key- words

Inflammatory bowel disease; Crohn's disease; ulcerative colitis; epidemiology

The study of the incidence of the inflammatory bowel diseases (IBD) in the industrialized countries noted a higher incidence in the countries of the North in comparison with the South, conclusive to a North-South gradient. On the other hand, a recent French study noted an increase of the incidence of the Crohn's disease (CD) at the expense of the ulcerative colitis (UC). Data on the epidemiology of IBD in the countries in the process of development are sparse.

The aim of our study was to assess the prevalence and the clinical and demographic features of IBD from the number of diagnosed inpatients in the department of gastroenterology of the Habib Thameur hospital and to compare these features of IBD and its subgroups during five 3-year periods.

PATIENTS AND METHODS

It is a retrospective study including patients admitted to hospital than followed for IBD. The diagnosis of IBD was based on clinical picture, endoscopic evaluation, histological assessment of mucosal biopsy specimens, and radiological findings (small bowel barium follow-through). All of the patients who were included in the study had an established diagnosis of IBD. Patients whose diagnosis of IBD was not confirmed by endoscopy or histological findings were excluded from the study. Patients were further categorized in 3 subgroups CD, UC, and indeterminate colitis (IC) according to the 2005 Montreal classification.

For each patient, the following data were recorded: diagnosis; year of diagnosis; age at diagnosis; sex; family history; symptoms at presentation; duration of symptoms before diagnosis; extent, severity, clinical behavior, and localization of disease.

We compared the evolution of the frequency of IBD, them type and their initial location according to 5 periods of 3 years. We searched an eventual change of the initial diagnosis during the follow-up.

Statistical analysis

Descriptive statistics were expressed as number (%). Statistical data were generated using SPSS (version 11.5). Differences were assessed by the Chi square test for categorical variables and the Student's t-test for continuous ones. For all statistical analyses, a two tailed p value < 0.05 was considered significant.

RESULTS

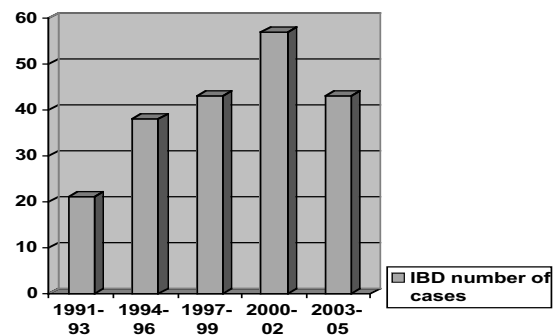
During this period, 202 cases of IBD were diagnosed (55,5% of CD, 41,5% of UC and 6% of IC) [figure 1]. The initial diagnosis was modified in 5 patients during the follow-up: 3 UC in favor of a CD, 1 CD in favor of an UC and a CD in favor of an IC. The number of cases of IBD increased through the time, it doubled between the first and the last period, but this difference did not been significant [figure 2].

The increase of the frequency had remained proportional according to the sex, but a masculine predominance for the CD and a feminine predominance for the UC were noted.

Figure 1: IBD subtypes



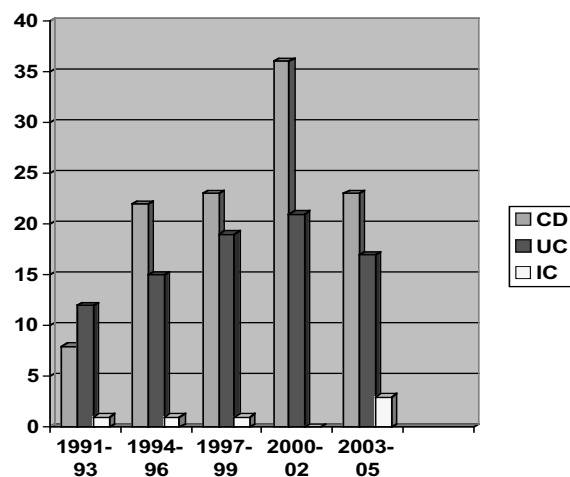
Figure 2: Distribution of the number of diagnosed IBD according to the periods



The average age to the diagnosis had increased during the time, with a difference of 2 years between the first and the last period, without being significant.

At the first period, the UC predominated in comparison with the CD. Afterward, their frequency progressively increased and the CD had become predominant, but this difference did not been significant [figure 3].

Figure 3: Distribution of the number of CD, UC and IC according to the periods



There wasn't a significant difference in the evolution of the initial location of the CD, and a pure small bowel location was predominant [figure 4]. All the same, there wasn't a significant difference in the evolution of the initial location of the UC, and the proctitis was predominant [figure 5].

Figure 4: Distribution of the initial locations of the CD according to the periods

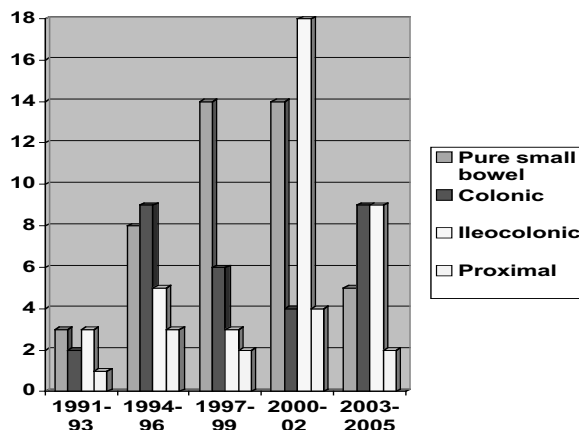
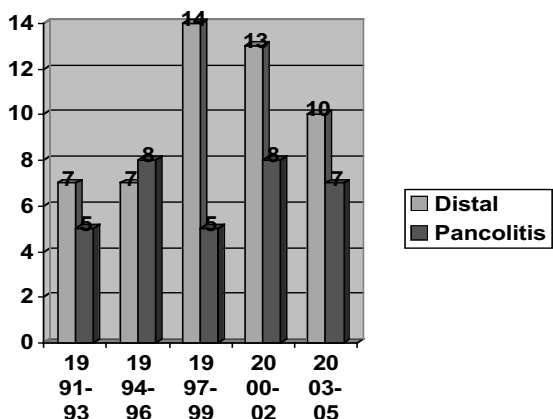


Figure 5: Distribution of the initial locations of the UC according to the periods



DISCUSSION

The epidemiological studies concerning the variation of the incidence of IBD, across the time and the geographic areas, are important to identify new tracks concerning the genetic or environmental factors to the origin of these affections [1]. Data on the epidemiology of IBD originates us Europe and North America [1]. We tried to appreciate the evolution of the epidemiology of IBD through this short series of diagnosed inpatients in the gastroenterology department of Habib Thameur hospital, which is not a referral center of IBD in Tunisia. Although or the number of cases, or their geographic

distribution were not sufficient to estimate the incidence, we tried to determine the characteristics of our patients and to compare them to the data of the literature.

The predominance of UC on CD was observed in most of the European registers, except for certain French regions and Belgium, where ratio UC/CD is inferior to 1 [1-5]. In our series, ratio UC/CD was of 0.75 and rejoined the one of these regions. In the investigations where the incidence variations do not seem linked to methodological bias, we note a stability of the UC and an increase of the frequency of CD during the time. These data can explain observed ratio in our study. This difference also could be explained by an under estimation of the incidence of IBD in the studies where only the news cases are taken into account. In fact, the replacement of the non-incident cases in incident cases during the follow-up allowed increasing the incidence of IBD. This under-estimation is more important for UC, since the "useful" length of follow-up is of 6 months for the diagnosis of CD and 24 months for the UC [1]. Thus, many cases could be classified UC during the follow-up and invert ratio. Nevertheless, in our series, this explanation is not plausible, since our patients were followed on a long period and we took account of the modification of the initial diagnosis during the follow-up. However, the predominance of UC can be explained by a selection bias, being given that CD, harsher to take charge of, is frequently followed in a hospital structure. Besides, it was retrieved an important increase of the incidence of IBD during the Second World War, to be stabilized from the years 80 [6]. In the developing countries, this stabilization again was not objectified, and an increase of the incidence of IBD uniformly is observed. This is the case of our series, since the frequency of IBD was multiplied by 2 between 1991 and 2005. The incidence of CD seems to follow a parallel evolution to the one of IBD. Nevertheless, certain studies retrieved a persistence of this increase, in particular in the Northwest of France, where the incidence of CD increased of 23% between 1988 and 1999 [3]. In our series, the frequency of the CD was multiplied by 3 between 1991 and 2005. The data of the literature concerning the evolution of the incidence of UC are contradictory. In the Minnesota, this one lowered from 15 cases per 105 inhabitants to 8 cases/105 between 1973 and 1993, of even to Copenhagen and the North of France [3, 6]. On the other hand, Norwegian and Irish studies observed an increase of the incidence of UC [6]. In our series, the frequency of UC was multiplied by 1.4, it has therefore increased, but in a manner less important than CD. Our series is characterized equally by an opposed sex ratio to the one habitually retrieved. Although this study wasn't representative of the general population, these differences could suggest the intervention of environmental or genetic factors. In particular, we think that the tobacco use, is less shed with the women of our population, in contrast to the countries of the North, this would protect them from CD and would expose to UC.

Concerning the topography of the lesions, an increase of pure colonic location of CD was retrieved in Irish and Swedish studies [6], while in the North of France; it was observed an increase of the ileocolonic location [3]. In our study, locations evolved in a proportional manner. For UC, distal location

predominates in all the series of the literature, and between certain of them we retrieve an increase of the distal location and a stabilization of the pancolitis. In our series, distal location predominated, but the increase was done in a proportional manner some be the initial site.

CONCLUSION

Although we cannot amount the exact incidence, we noted an

increase of the frequency of IBD, with a more marked elevation for CD. The creation of a national register allowing calculating the incident cases of IBD would allow practicing epidemiological studies and identifying thus new tracks concerning genetic and environmental factors to the origin of these affections.

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