Journal of Psychosomatic Research 102 (2017) 47–53

Contents lists available at ScienceDirect

Journal of Psychosomatic Research

journal homepage: www.elsevier.com/locate/jpsychores

Review article

Inflammatory Bowel Disease and Eating Disorders: A systematized review of comorbidity

L. Ilzarbe[a], M. Fàbrega[b], R. Quintero[c], A. Bastidas[d], L. Pintor[c], J. García-Campayo[a,e,f,g], F. Gomollón[a,f,h,i], D. Ilzarbe[j,k,*]

[a] Faculty of Medicine, Universidad de Zaragoza, Zaragoza, Spain
[b] Department of Child and Adolescent Psychiatry, Imperial College London, London, United Kingdom
[c] Psychosomatic and Liason Psychiatry Unit, Department of Psychiatry and Psychology, Neuroscience Institute, Hospital Clínic de Barcelona, Barcelona, Spain
[d] Acute Inpatient Unit, Department of Psychiatry and Psychology, Neuroscience Institute, Hospital Clínic de Barcelona, Barcelona, Spain
[e] Department of Psychiatry, Hospital Universitario Miguel Servet, Zaragoza, Spain
[f] Aragón Health Research Institute (IIS Aragón), Zaragoza, Spain
[g] Network for Prevention and Health Promotion in Primary Care (RedIAPP), Madrid, Spain
[h] Inflammatory Bowel Disease Unit, Department of gastroenterology, Hospital Clínico Universitario Lozano Blesa, Zaragoza, Spain
[i] Centro de Investigación Biomédica en Red, Enfermedades Hepáticas y Digestivas (CIBEREHD), Madrid, Spain
[j] Department of Child and Adolescent Psychiatry, Institute of Psychiatry, Psychology and Neurosciences, King's College London, London, United Kingdom
[k] Faculty of Medicine, Universitat de Barcelona, Barcelona, Spain

ARTICLE INFO

Keywords:
Anorexia Nervosa
Bulimia Nervosa
Crohn's Disease
Eating Disorders
Inflammatory Bowel Disease
Ulcerative Colitis

ABSTRACT

Objective: Research has shown that there is an association between Inflammatory Bowel Disease, anxiety and mood disorders, however little is known about their association with Eating Disorders. In this paper we will present a case of a young female with a comorbid diagnosis of Inflammatory Bowel Disease and Eating Disorder, and then discuss the results from a systematic review of the literature, describing published cases of patients with the same condition.

Methods: A systematized review of the literature was conducted according to MOOSE guidelines. A computerized literature search of MEDLINE, PsycINFO and EMBASE, and a manual search through reference lists of selected original articles were performed to identify all published case-reports, case series and studies of Inflammatory Bowel Disease and Eating Disorders.

Results: Fourteen articles were included, encompassing 219 cases, including ours. The vast majority were females ranging from 10 to 44 years old. Anorexia Nervosa (n = 156) and Crohn's Disease (n = 129) was the most frequent combination (n = 90) reported in the literature. These cases present a poor prognosis because of corticoid refusal, medication abandon and/or deliberate exacerbation of IBD symptoms, in the context of trying to lose weight.

Conclusion: Recent evidence suggests there is a possible association between Inflammatory Bowel Disease and Eating Disorders, although the mechanisms involved in its ethiopathogenesis are still unknown. To be aware of this association is important because a delayed diagnosis of this comorbidity may lead to worse prognosis. Further research and a multidisciplinary approach could facilitate earlier diagnosis and provide therapeutic interventions.

1. Introduction

Inflammatory Bowel Disease (IBD) is a group of conditions/disorders characterized by chronic inflammation of the gastrointestinal tract and episodes of relapses and remissions; especially in genetically susceptible individuals exposed to environmental risk factors [1,2]. IBD comprises Crohn's Disease (CD), Ulcerative Colitis (UC), microscopic colitis, indeterminate colitis and pouchitis [3]. The prevalence of IBD

Abbreviations: AN, Anorexia Nervosa; AutoAbs, Autoantibodies; BN, Bulimia Nervosa; CC, Collagenous Colitis; CD, Crohn's Disease; ED, Eating Disorders; EDNOS, Eating Disorder No Otherwise Specified; IBD, Inflammatory Bowel Disease; MOOSE, Meta-Analyses and Systematic Reviews of Observational Studies; UC, Ulcerative Colitis

* Corresponding author at: Department of Child and Adolescent Psychiatry, Institute of Psychiatry, Psychology and Neurosciences, King's College London, (PO85), 16 De Crespginy Park, London SE5 8AF, United Kingdom.

E-mail addresses: m.fabrega-ribera@imperial.ac.uk (M. Fàbrega), rquintero@clinic.ub.es (R. Quintero), bastidas@clinic.cat (A. Bastidas), lpintor@clinic.ub.es (L. Pintor), daniel.ilzarbe_simorte@kcl.ac.uk (D. Ilzarbe).

http://dx.doi.org/10.1016/j.jpsychores.2017.09.006
Received 21 June 2017; Received in revised form 27 August 2017; Accepted 13 September 2017

may be increasing as a result of the low mortality, the earlier diagnoses and the longer duration of disease [1]. The registered prevalence of CD varies from 0.6 to 322 per 100,000 in Europe, and from 4.9 to 505 per 100,000 in case of UC [2]. Most studies showed a peak incidence in the second to fourth decade, with the highest incidence amongst 20 to 29 year old [1,2]. There are not great differences between males and females [1,2].

The association between IBD and some mental disorders, especially anxiety and mood disorders, has been extensively studied [4–6]. According to the meta-analysis by Neuendorf et al. [6], the prevalence of anxiety and depressive disorders in IBD is 21% and 15% respectively. These rates increase up to 35% for anxiety symptoms and 22% for depressive symptomatology. However, other mental disorders have received sparse attention in literature. Especially, and despite the potential overlap in symptoms, the relationship between Eating Disorders (ED) and IBD has not been widely studied.

Anorexia Nervosa (AN) and Bulimia Nervosa (BN) have been the main diseases classically established as ED [7]. Nevertheless, eating disorder not otherwise specified (EDNOS), which includes partial syndromes of AN and BN, has been the most commonly diagnosed [8] till the recent publication of Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-5) [9]. The point prevalence of EDNOS in a nation-wide community sample of young females was 2.4% [8]. In the case of AN and BN, the lifetime prevalence amongst women range from 0 to 0.9% and from 0.9 to 1.5% respectively [8]. AN has an overall incidence rate of 4.2–8.1 new cases per 100,000 persons per year [10]. In addition, AN presents the highest rate of mortality amongst all psychiatric illnesses, with a Crude Mortality Rate of 5.1 deaths per 1000 person-years [8].

There are some groups who have studied the role of diet in IBD [11–13]. It has been reported that patients with IBD have strong beliefs about some food triggering IBD symptoms [11], which frequently drives them to avoid specific nutrients and/or reduce global intake. This may exacerbate malnutrition, and moreover it also may have an impact on their social life, as it usually involves events that include eating and drinking [11]. Both, malnutrition and social isolation have been related with a significant reduction of quality of life in this population [12]. In addition, there are common features in both ED and IBD (see Table 1) which may lead to misdiagnosis. It has been reported mainly between IBD and AN [14–21] due to the restrictive pattern [13], body mass index (BMI) reduction, predominance of females and similar age of onset [2,22,23]. Apart from the overlapping symptomatology, both conditions can also coexist as described in the case below, making differential diagnosis more difficult (see Table 1).

There is a paucity of research looking at eating attitudes and behaviours in diet-related chronic health conditions [24] and autoimmune diseases such as IBD [25]. Satherley et al. [13] have recently reported higher prevalence of disordered eating symptoms in participants with IBD relative to healthy controls. Nevertheless, to our knowledge there is no previous review focusing on subjects with IBD fulfilling criteria for a diagnosis of an eating disorder. Thus, we present a case of a young female with a comorbid diagnosis of IBD and ED, and a systematized review of published cases of patients with the same condition.

1.1. Case report

A 20-year-old Caucasian woman, diagnosed with pancolonic and ileal CD at age 17, was admitted to the gastroenterology ward for autologous hematopoietic stem cell transplantation. She was corticodependent, intolerant to infliximab and required enteral nutrition at admission. She had been under exclusive enteral nutrition for 8 months. She had also history of Primary Sclerosing Cholangitis (diagnosed the previous year). She reported irregular menstruation since the age of 14 and 6 months of amenorrhea before admission in relation with weight loss (from 60 to 47.5 kg in the previous year; height = 1.70 m; BMI = 16.4). She lived with her parents and her 24-year-old brother. She had abandoned her studies due to her health condition.

Once admitted, the patient was referred to the liaison psychiatry unit for mood lability. She presented fluctuating low mood with loss of interest in her self-care and anxiety symptoms related to her condition (i.e. unmanageable fear of leaving home due to difficult accessibility to bathrooms). At the age of 19 she had been diagnosed with adjustment disorder and started treatment with paroxetine 20 mg/day and alprazolam 0.25 mg/day.

During her admission, she frequently refused to eat due to early satiety, abdominal pain and nausea, despite the gastroenterologist's recommendation of oral intake. In addition, she also hid prescribed medication and did not take it. Since the age of 14 she also reported a selective pattern of eating, progressive restriction of food intake, and feeling more comfortable using enteral nutrition. She did not describe body image disturbance or fear of gaining weight. Considering her BMI, the amenorrhea and the restrictive diet she was finally diagnosed with EDNOS.

2. Methods

This systematized review was conducted according to the guidelines for Meta-Analyses and Systematic Reviews of Observational Studies (MOOSE) [26].

A computerized literature search of MEDLINE, PsycINFO and EMBASE was performed up to the 22nd of December 2016. Search strategy: “Inflammatory Bowel Disease” OR “Crohn's Disease” OR “Ulcerative Colitis” OR “microscopic colitis” OR “indeterminate colitis” OR “pouchitis” AND “Eating Disorder” OR “Anorexia Nervosa” OR “Bulimia Nervosa”.

The reference lists of the identified original articles and case reports were also searched manually for additional records. Studies were assessed by first author (L.I.), and when in doubt, the final decision was made in consultation with a second author. Some authors were contacted to obtain further information. No limitations were placed on language, publication date and publication status.

The following inclusion criteria were used: (I) any data reported about patients with a comorbid diagnosis of IBD and AN, BN or EDNOS. The exclusion criteria were: (I) cases reported with misdiagnosed IBD or ED, or uncertain diagnosis; (II) reviews and published conference abstracts. Case reports and case series were included given the limited number of published epidemiological studies addressing this comorbidity. Publications with cases reporting additional comorbidities were not excluded.

Data were extracted from eligible articles according to the inclusion criteria in a pre-specified Microsoft Excel spreadsheet. The following information was collected: (I) demographic characteristics (including age, gender, number of patients and country of origin); (II) clinical characteristics (including type of IBD, age of diagnosis of IBD, type of ED, age of diagnosis of ED, first diagnosis, initial symptoms and other comorbidities) and; (III) treatment (including drugs and procedures).

3. Results

The search strategy identified 495 records, after removing 80 duplicates. 461 were excluded at first screening based on titles and abstracts, leaving 34 articles for full text review. Of them, we included 14 articles, excluding 20 articles for the reasons listed in Fig. 1. Amongst the 14 articles, there were two retrospective cohort studies [27,28], six case reports [29–34], and six case series [19,35–39] (Table 2).

A total of 219 patients, including our case, with a comorbid diagnosis of IBD and ED have been reported in the scientific literature (Table 2). The vast majority were females, with only three cases reported on males. The mean ages ranged from 10 to 44. AN (n = 156) and CD (n = 129) were the most prevalent diagnosis amongst ED and IBD respectively. In fact, the comorbidity between them, AN plus CD,