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Alimentary Tract

Self-medication with steroids in inflammatory bowel disease

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ABSTRACT

Background: The self-prescribing rates of corticosteroids in inflammatory bowel disease (IBD) patients treated with biologicals are unknown.
Aim: To investigate the frequency and modalities of self-medication with steroids in adult IBD patients.
Methods: Patients with IBD who attended Nancy University Hospital between November 2012 and May 2013 were included in the study. Patients were interviewed using an 11 item questionnaire.
Results: 100 patients participated in the survey. In total 15 patients (15%) had already used corticosteroids without medical prescription since their IBD diagnosis and 4 patients of them (27%) used steroids as self-medication while on anti-TNF treatment. The mean total duration of corticosteroid treatment was 24 days (range 1.5–105). In total 4 patients (27%) used corticosteroids more than 10 times without medical prescription (range 1–20). The two main reasons were the need for quick relief of symptoms ($n = 6$) and the unwillingness to consult a physician ($n = 3$).
Conclusion: A relatively high proportion of patients with IBD use corticosteroids without medical prescription. Due to their side effects, self-medication may include 'steroid dependency' as it may reflect uncontrolled disease. As steroids have significant side effects and patients may have active disease it is important to counsel patients and to monitor their self-prescribing patterns in IBD patients.

1. Introduction

Inflammatory bowel diseases (IBD) are chronic disabling conditions. In more recent years it appears that, despite increasing use of immunomodulators, the cumulative corticosteroid exposure did not decrease among IBD patients [1–3].

According to ECCO guidelines, corticosteroids are appropriate treatment in left-sided and extensive ulcerative colitis (UC) if symptoms of active colitis do not respond to mesalazine, and in severe left-sided colitis [2]. In patients with Crohn's disease (CD) with moderate and severe activity localized to the ileocaecal region, extensive small bowel or active colonic Crohn's disease (CD) should initially be treated with corticosteroids (ECCO) [3].

In previous reviews of the French Nancy IBD cohort, the probabilities of receiving corticosteroids 5 years from diagnosis were respectively 75% in UC [4] and 71% in CD [5]. A recent Canadian population-based IBD study reported that the proportion of patients with IBD who were prescribed corticosteroids within 5 years of diagnosis was 52% [1].

Furthermore the World Health Organization (WHO) defines self-medication as the selection and usage of prescription drugs without medical prescription, in order to treat diseases or promote symptomatic relief [6]. Potential hazards of self-medication practice are numerous and includes incorrect self-diagnosis, delays in seeking medical advice when required, infrequent but severe adverse reactions, potentially dangerous drug interactions, incorrect manner of administration, incorrect dosage, incorrect choice of therapy, masking of a severe disease and the risk of dependence [7].

The adverse effects of corticosteroid are well known and include osteoporosis, hypertension, diabetes, Cushing syndrome, cataract, glaucoma and infections [8,9]. In IBD, corticosteroid-related adverse effects are frequent and have been estimated at 55% of patients treated with prednisolone 40 mg/day and 33% of patients treated with budesonide 9 mg/day [8]. The occurrence and severity of most adverse events are dependent on the dose and duration of corticosteroid therapy, with the incidence increasing after 2–3 weeks of treatment [8]. However, steroids with low systemic bioavailability may lead to fewer adverse events.

In a population-based cohort from Copenhagen, steroids dependency was observed in 36% of patients with IBD [10]. In a population-based cohort of Olmsted County, Minnesota, steroid

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dependency rates for CD and UC were 28% and 22%, respectively [11]. The ECCO definition of steroid-dependence requires that the total duration of steroids does not exceed 3 months before a threshold equivalent to prednisolone 10 mg/day is reached. Patients are still considered steroid-dependent if they relapse within 3 months of stopping steroids [12].

These studies and guidelines indicate that it is crucial to identify IBD patients who self-medicated with corticosteroid as it may be associated with adverse effects e.g. infections, and that this pattern of self-medication may be defined as steroid dependence. To the best of our knowledge, there is no data on self-medication with steroids in IBD. We therefore conducted a survey to evaluate modalities of and reasons for steroids self-medication in patients with IBD.

2. Methods

Patients with IBD were recruited from the Nancy University Hospital Gastroenterology Unit, and hospitalized in the day hospitalization Unit for an infliximab infusion from November 2012 to May 2013. The investigators interviewed the patients with an 11-point questionnaire during their clinical visit.

Information about the Nancy IBD cohort is reported to the Commission Nationale de l'Informatique et des Libertés (no. 1404720), which supervises the implementation of the act regarding data processing, data files, and individual liberties that came into effect on 6 January 1978, amended on 6 August 2004, to protect the personal data of individuals.

2.1. Questionnaire

The questionnaire collected data on demographics (age, sex, etc.) and disease characteristics (CD or UC, location, diagnosis date, ongoing medications).

Initially a pilot questionnaire was first administered to 10 consecutive IBD patients on November 2012 to examine for questionnaire applicability. As a direct result of this pilot survey, no questionnaire modifications were made. The questionnaire was then administered to consecutive IBD patients as routine practice between 2012 and May 2013. The questionnaire collected information on steroid self-prescribing, dosing, frequency and reasons for this (Supplementary Methods, Appendix A).

2.2. Statistical analysis

Data was collected using Microsoft Office Excel. Quantitative variables were presented as median and range. Proportions were expressed as percentages.

3. Results

3.1. Baseline characteristics of the 100 patients

A total of 100 patients consented to participate in this cross-sectional survey and were included in the analysis. In total 53 patients were male, the median age was 36 years (range 19–78). In total 73 patients had CD and 27 had UC. Of the 100 included patients, 98% were treated with anti-TNF (infliximab 95%, adalimumab 4%, certolizumab 1%) and 10% were treated with IS (azathioprine) at the time of survey. However, patients were interviewed about self-medication since their IBD diagnosis. The baseline characteristics of included patients are shown in Table 1.

Table 1
Baseline characteristics of the 100 patients.

	Self-medication $n = 15$	No self-medication $n = 85$	Overall population $n = 100$
Median age at inclusion (years) and range	36 (25–61)	37 (19–78)	36 (19–78)
Age at diagnosis (Montreal)			
A1	1 (6.7%)	13 (15.3%)	14
A2	13 (86.7%)	57 (67%)	70
A3	1 (6.7%)	15 (17.6%)	16
Males	11 (73%)	42 (50%)	53
CD/UC	10 (66.7%)	63 (74.1%)	73
Montréal classification			
L1	0	12 (19.1%)	12
L2	3 (30%)	21 (33.3%)	24
L3	7 (70%)	30 (47.6%)	37
L4	0	0	0
B1	6 (60%)	33 (52%)	39
B2	1 (10%)	20 (32%)	21
B3	3 (30%)	10 (16%)	13
P0	7 (70%)	42 (67%)	49
P1	3 (30%)	21 (33%)	24
E1	3 (60%)	2 (0.1%)	5
E2	0	9 (40.9%)	9
E3	2 (40%)	11 (50%)	13
Anti-TNF at time of survey[a]	15 (100%)	83 (98%)	98
Infliximab	14 (93%)	81 (95%)	95
Adalimumab	1 (7%)	3 (3.5%)	4
Certolizumab	0	1 (1.1%)	1
Azathioprine	2 (13%)	8 (9%)	10
Active smoking/NA	6 (40%)/1	25 (29%)/31	31/32

[a] 27% (4/15) of the 100 included patients used steroids self-medication while being on anti-TNF treatment (see Table 2). NA, not available; CD, Crohn's disease; UC, ulcerative colitis; TNF, tumour necrosis factor.

3.2. Frequency of steroids self-medication

In total 15 patients (15%) declared that they had used corticosteroids without medical prescription. Of these 15 self-administering corticosteroid, 8 admitted to taking prednisolone (53%), 4 to prednisone (26%), one patient administered both prednisolone and prednisone (7%), one patient administered budesonide (7%), and one patient administered methylprednisolone (7%). Four patients (27%) used steroids self-medication more than 10 times (range 1–20).

3.3. Steroids self-medication modalities

Of the 15 patients, the first prescribing physician was a gastroenterologist in 12 cases (hospital ($n = 6$), private ($n = 6$)), and a general practitioner for the other 3.

The median number of corticosteroid courses was 2.5 (range 1–20). The median treatment duration at the maximal dose was 7 days (range 1.5–365). The median total treatment duration was also 7 days (range 1.5–365).

Seven out of 15 patients started with 60 mg/day or less of prednisolone. Three patients used 40 mg/day or less of prednisone. The patient who self-administered budesonide used a dose of 9 mg/day. The doses of the induction treatment are shown in Table 2 (question 6).

Nine out of 15 patients (60%) decreased the dose by themselves. Since their IBD diagnosis, 4 out 15 patients (27%) used self-medication while on anti-TNF treatment.

The median period between symptoms onset and first steroids use was 60 h (range 0–720). One patient used steroids while being