

The educational role of IBD nurses in Italy in vaccinations: do not miss the moment for COVID-19

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Abstract. – OBJECTIVE: The role of nurses has great educational-scientific potential in COVID-19 vaccination. The aim of this work is to clarify whether the educational role of IBD nurses in vaccination is perceived by IBD patients.

MATERIALS AND METHODS: A cross-sectional study was carried out, through a questionnaire, to evaluate how many IBD patients received health education about vaccinations from the dedicated nurses (IBD nurses).

RESULTS: There were four hundred questionnaires, 310 patients (77.5%) answered all questions. The nurse does not appear to help educate patients on influenza vaccination (66.1%) or pneumococcal vaccination (81.6%). Disclosed patients have many doubts about the new COVID-19 vaccination (74.4%) and many seek information (74.8%) and think that the nurse can provide the necessary information (70%).

CONCLUSIONS: IBD nurses do not seem very active in the vaccination education role, and they do not meet patients' expectations, which are conversely very high.

Key Words:

Inflammatory bowel disease, SARS CoV-2, Vaccine, Biologics.

In fact, educating patients by informing them on the benefits and risk of vaccinations, especially those receiving immunosuppressive treatments, represents an important moment of quality care for IBD nurses.

As the COVID-19 pandemic has spread^{10,11}, there has been growing concern about the impact of the virus on patients with IBD^{12,13}.

Public discussion is focusing on the opinion of people who will soon be asked to undergo the vaccination, but who still express doubts and fears related to the new formulation of the vaccine that has been proposed. The role of IBD nurses, in this context, represents a great educational-scientific moment, in which, thanks to their skills and expertise in the management of IBD, they will be able to support the choice, and resolve doubts and fears related to the new vaccination against COVID-19 infection.

Materials and Methods

A cross-sectional study was carried out through a questionnaire ([Supplementary File](#)), to evaluate how many IBD patients receive health education about vaccinations from the dedicated nurses (IBD nurses). We developed an anonymous survey, that was administered in electronic format, via email. The protocol was approved by the local Ethics Committee (Rome, Italy, Fondazione Policlinico Gemelli IRCCS 31 March 2020), and all enrolled patients gave written informed consent. The study protocol conforms to the ethical guidelines of the 1975 Declaration of Helsinki as reflected in prior approval by the Human Research Committee of the Fondazione Policlinico Gemelli IRCCS.

Introduction

Immunosuppressive therapy (immunomodulators, TNF antagonists, non-TNF-targeted biologics and therapies aimed at small molecules) is now widely used to induce and maintain remission in Inflammatory Bowel Disease (IBD) patients with steroid dependency or resistance^{1,2}. However, these therapies, in addition to malnutrition that can complicate IBD³, can weaken the immune system and potentially put patients at increased risk for infections and infectious complications⁴⁻⁹.

Demographic data, education, work activity, disease duration, IBD-related therapies, IBD history, and influenza and pneumococcal vaccination status were assessed.

We also investigated concerns related to COVID-19 vaccination, where and if patients found information and their intentions regarding COVID-19 vaccination.

We also assessed how well the patient was informed by the nurse about the vaccination and the patient's opinion on the IBD nurse regarding his or her skills and knowledge of vaccines. Four hundred questionnaires were sent; 310 patients (77.5%) answered all the questions (151 with Crohn's Disease (CD, 48.7%), 156 with ulcerative colitis (UC, 50.3%) and 3 undetermined IBD (IBD-U, 0.9%). Baseline characteristics are

presented in Table I. Thirty-seven (10.6%) patients had an academic degree in health-related sciences. Mean disease duration was 13.2 years $\pm$ 9.9, while the mean time spent in treatment at the IBD reference center was 8.7 years $\pm$ 8.1.

One hundred and ninety-nine patients (64.2%) were treated with biologics and/or immunosuppressive therapy. One hundred and sixty-four biologic therapy (53%) and 13 (4.2%) experimental drugs, and 22 (7.1%) traditional immunosuppressants (IMMs). Nine (3%) patients were in combination therapy with biologics and IMMs.

Workers were the group with highest rate of flu (95, 60%) and pneumococcus vaccine (48, 64%). Twenty-six patients had contracted the SARS CoV-2 infection (8.4%); the majority of patients disclosed that they were afraid of contracting the

Table I. Social-demographic characteristics.

	Total (310)	Crohn's disease 151 (48.7%)	Ulcerative colitis 156 (50.3%)	Undetermined IBD 3 (0.9%)
Age - mean (SD)	41.2 $\pm$ 13	27.3 $\pm$ 5.5	39.4 $\pm$ 12.8	45 $\pm$ 10.1
Sex m/f - n (%)	220 (71%)/ 90 (29%)	40 (27.1%)/ 111 (73.5%)	49 (31.4%)/ 107 (68.6%)	1 (33.3%)/ 2 (67.7%)
Region of origin - n (%)				
- North	86 (27.8%)	52 (34.5%)	32 (20.5%)	2 (67.7%)
- Centre	112 (36.1%)	57 (37.7%)	55 (35.2%)	0
- Sud	112 (36.1%)	42 (27.8%)	69 (44.2%)	1 (33.3%)
Patients in therapy outside the region y/n - n (%)	70 (22.6%)	31 (25.6%)/ 120 (79.4%)	39 (25%)/ 117 (75%)	0
Years have passed since diagnosis - mean (SD)	13.2 $\pm$ 9.9	14.7 $\pm$ 11.2	11.8 $\pm$ 8.4	4.5 $\pm$ 4.9
Occupation - n (%)				
- Retired	22 (7.1%)	14 (9.2%)	8 (5.1%)	0
- Student	28 (9%)	10 (6.6%)	18 (11.5%)	0
- Worker	194 (62.6%)	93 (61.6%)	100 (64.1%)	1 (33.3%)
- Unemployed	26 (8.4%)	13 (8.6%)	12 (7.7%)	1 (33.3%)
- Housewife	40 (12.9%)	21 (14%)	18 (11.5%)	1 (33.3%)
Education - n (%)				
- Up to elementary school	0	0	0	0
- Up to middle school	57 (18.4%)	32 (21.2%)	24 (15.4%)	1 (33.3%)
- Diploma	141 (45.5%)	72 (47.7%)	69 (44.2%)	0
- Bachelor's degree healthcare	23 (7.4%)	13 (8.6%)	10 (6.4%)	0
- Bachelor's degree	27 (8.7%)	12 (7.9%)	14 (9%)	1 (33.3%)
- Master degree	52 (16.8%)	17 (11.3%)	34 (21.8%)	1 (33.3%)
- Master degree healthcare	10 (3.2%)	5 (3.3%)	5 (3.2%)	0
Therapy (multiple choice) - n (%)				
- Only biologic therapy	164 (53%)	89 (58.9%)	75 (48.1%)	1 (33.3%)
- Only immunosuppressant (aziatropin-metrotrexate)	22 (7.1%)	19 (12.6%)	12 (12.2%)	0
- Biologic therapy+imms	9 (3%)	7 (4.6%)	2 (1.3%)	0
- Experimental drug	13 (4.2%)	2 (1.3%)	6 (3.8%)	0
Feeling about the status of your condition (active/remiss./ don't know) - n (%)	109 (35.2%)/ 158 (51%)/ 43 (13.8%)	52 (34.4%)/ 73 (48.3%)/ 26 (17.3%)	56 (36%)/ 83 (53.2%)/ 17 (10.8%)	1 (33.3%)/ 2 (66.7%)/ 0
How long have you been treated at an ibd centre - mean (SD)	8.7 $\pm$ 8.1	9.2 $\pm$ 8.1	8.3 8.2	5 $\pm$ 4.3

Table II. Patients and vaccinations.

	N° tot paz (%)	Patients who have had the anti-flu vaccine Y (%)	Patients who have had the anti-p pneumococcus Vaccine? Y (%)	Patients who have contracted the COVID-19 infection Y (%)	Patients who are afraid of contracting COVID-19 infection? Y (%)	Patients favourable to the hypothesis of vaccination against COVID-19 y (%)
Disease		158 (50.9%)	75 (24.2%)	26 (8.4%)	243 (78.4%)	262 (84.5%)
- Crohn's disease	151 (48.7%)	76 (48.1%)	40 (53.3%)	16 (61.5%)	112 (46.1%)	122 (46.6%)
- Ulcerative colitis	156 (50.3%)	82 (51.9%)	35 (46.7%)	10 (38.5%)	129 (53.1%)	137 (52.3%)
- Indetermined colitis	3 (0.9%)	0	0	0	2 (0.8%)	3 (1.1%)
Region of origin		158 (50.9%)	75 (24.2%)	26 (8.4%)	243 (78.4%)	262 (84.5%)
- North	86 (27.7%)	37 (34.4%)	15 (20%)	9 (34.6%)	64 (26.3%)	72 (27.5%)
- Centre	112 (36.1%)	71 (45%)	35 (46.7%)	9 (34.6%)	91 (37.4%)	93 (35.5%)
- Sud	112 (36.1%)	50 (31.6%)	25 (33.3%)	8 (30.8%)	88 (36.3%)	97 (37%)
Activity		158 (50.9%)	75 (24.2%)	26 (8.4%)	243 (78.4%)	262 (84.5%)
- Retired	22 (7.1%)	18	8 (10.6%)	1 (3.8%)	19 (7.8%)	19 (7.3%)
- Student	28 (9%)	18 (11.1%)	8 (10.6%)	2 (7.7%)	23 (9.5%)	28 (10.7%)
- Worker	194 (62.6%)	95 (60.%)	48 (64%)	15 (57.7%)	151 (62.1%)	167 (63.7%)
- Unemployed	26 (8.4%)	11 (6.9%)	5 (6.6%)	5 (19.2%)	18 (7.4%)	22 (8.4%)
Housewife	40 (12.9%)	16 (10.%)	6 (8%)	3 (11.5%)	32 (13.2%)	26 (9.9%)
Educational		158 (50.9%)	75 (24.2%)	26 (8.4%)	243 (78.4%)	262 (84.5%)
- Up to elementary school	0	0	0	0	0	0
- Up to middle school	57 (18.4%)	25 (15.8%)	12 (16%)	7 (26.9%)	47 (19.2%)	44 (16.8%)
- Diploma	141 (45.5%)	65 (41.1%)	35 (46.7%)	7 (26.9%)	105 (43.2%)	119 (45.5%)
- Bachelor's degree healthcare	23 (7.4%)	14 (8.8%)	5 (6.6%)	6 (23.2%)	16 (6.6%)	20 (7.7%)
- Bachelor's degree	27 (8.7%)	16 (10%)	5 (6.6%)	2 (7.7%)	22 (9%)	22 (8.5%)
- Master degree	52 (16.7)	31 (19.7%)	13 (17.3%)	3 (11.5%)	46 (19%)	48 (18.4%)
- Master degree healthcare	10 (3.2%)	7 (4.4%)	5 (6.6%)	1 (3.8%)	7 (2.9%)	8 (3.1%)
Feeling about the status of your condition	158 (50.9%)	75 (24.2%)	26(8.4%)	243 (78.4%)	262 (84.5%)	
- Activate	109 (35.2%)	45 (28.5%)	25 (33.3%)	7 (26.9%)	87 (35.8%)	88 (33.6%)
- Remission	158 (50.9%)	90 (57%)	41 (54.7%)	14 (53.9%)	122 (50.2%)	138 (52.7%)
- Don't know	43 (13.8%)	23 (14.5%)	9 (12%)	5 (19.2%)	34 (14%)	36 (13.7%)

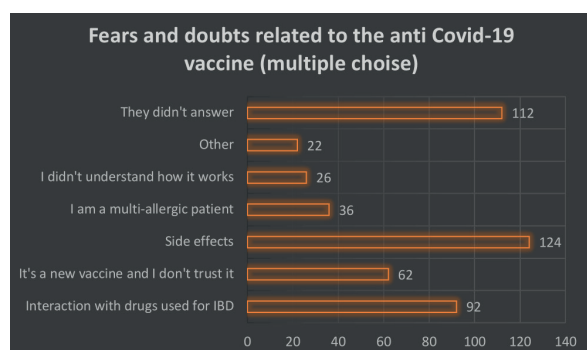


Figure 1. Fear and doubts.

infection (243, 78.4%). Notably, 262 (84.5%) revealed their intention to get the COVID-19 vaccination. (Table II).

With regard to the fear related to COVID-19 vaccination (Figure 1), the most selected choice was “side effects” by 124 patients while “not knowing how it works” was chosen by 26. Surprisingly, when asked where they got information (Figure 2), 169 patients answered “Internet / Social Network”, whereas only 12 answered “nurse” and 46 “Gastroenterologist”.

Discussion

In Italy, patients do not seem to get vaccines on the advice of IBD nurses, and in fact the vaccina-

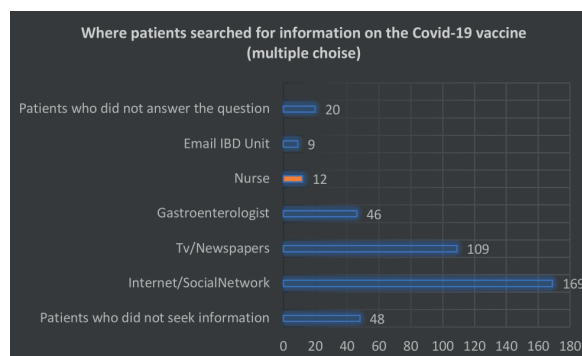


Figure 2. Information.

tion rate is still very low, especially for pneumococcal vaccination (Figure 3). Right now, patients have many doubts and fears related to the new COVID-19 vaccination and perhaps IBD nurses, who seem to be deemed competent by patients, should seize the moment to create educational events to increase vaccination rate by informing patients in IBD clinics.

Conclusions

In conclusion, the role of IBD nurses does not seem to have relevance in the education of influenza and pneumococcal vaccinations; however, patients seem to consider the IBD nurse competent regarding vaccination against COVID-19.

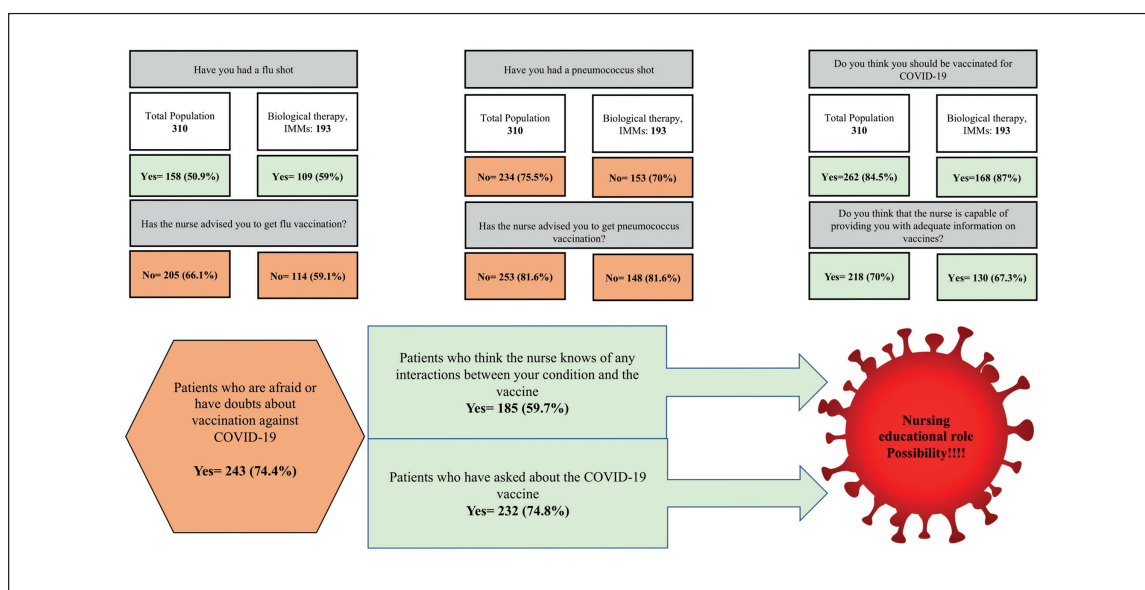


Figure 3. Educational Nursing role.

Conflict of Interest

The Authors declare that they have no conflict of interests.

Authors' Contribution

Daniele Napolitano RN: conception and design, analysis and interpretation of the data; drafting of the article; Giuseppe Privitera MD, Elisa Schiavoni RN, Laura Turchini RN Valeria Amatucci RN, Daniela Pugliese MD, Antonio Gasbarrini MD, Franco Scaldaferri MD, Alessandro Armuzzi MD: drafting of the article, critical revision of the article for important intellectual content; final approval of the article.

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