Opportunistic Infections in Patients Treated with Biologic Drug Therapy.

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Background/Purpose: Biological drug therapy is frequently used to treat autoimmune diseases.

These drugs have an increased risk of infections, among them opportunistic

infections.

To evaluate the frequency and type of opportunistic infections in patients with

auto immune rheumatic diseases treated with biologic drugs compared to

controls.

Establish whether disease and treatment features influence frequency and

severity of opportunistic infections.

Methods:

Biobadasar is database of rheumatic diseases patients treated

with biologic drugs in Argentina. Created in 2010, it includes patients with a

diagnosis according to accepted criteria treated with biologic drug therapy and

controls not treated with biologic drugs.

Opportunistic infections (OI) are caused by pathogens (bacteria, viruses,

fungi, parasites or protozoa), that usually do not cause disease in a healthy

person (WHO).

The purpose of this work is to study the characteristics of opportunistic

infections in patients with rheumatic diseases on biologic drug therapy

compared with controls using the BIOBADAR database. Statistical analysis was done using Chi-square test and t test with a

significant p 0.05.

Results: We included 2356 patients, 1275 54% on biologic drug therapy

and 1081, 46% controls; 1862/2356, 79% were women, mean age 53.83

(SD6.02) years. Rheumatoid arthritis was the most common diagnosis

1829/2356, 77.6%.

Opportunistic infections were diagnosed in 40/1275 3.1% of patients

treated with biologics, while 11/1081,1% of controls (p 0.0004, OR 3.1,

95% CI 1.6–6.1).

Herpes Zoster was observed in 37 patients followed 6 Candidiasis, 2

Histoplasmosis, and one patient for each of the following, Cytomegalovirus,

Pneumocystis jirovecii, hominis Blastocystis, Cryptosporidium, Echinococcus

and Proteus.

Hospital admission was needed for 6/51, 11.7% of patients.

The median number of months from disease onset to the OI was 127 (IQR

46–223) months and from biological treatment onset to OI was 9 (IQR

4–18.5) months.

Table 1: Demographic Characteristics, Pathology and Treatment According to the Presence of Opportunistic Infections in Patients Treated with Biologics N: 1275

	With Opportunistic Infection (N:40)	Without Opportunistic Infection (N: 1235)	p	OR (IC95%)
Female n (%)	33 (82.5)	969 (72.5)	0.69	0.77 (0.33-1.76)
Years m±DS	**59.5 ± 14**	**53 ± 16**	**0.02**	
Month history M (RIQ)	60 (49-69)	56 (44-65)	0.07	
Neoplasia n (%)	**4 (10)**	**16 (1.3)**	**0.003**	**8.46 (2.69-26.59)**
Lymphoma n (%)	0	2 (0.2)	1	0.96 (0.95-0.97)
ischemic heart disease n (%)	1 (2.5)	18 (1.5)	0.45	1.73 (0.22-13.31)
Diabetes n (%)	3 (7.5)	78 (6.3)	0.73	1.2 (0.36-3.98)
kidney failure n (%)	**3 (7.5)**	**12 (1.0)**	**0.01**	**8.26 (2.23-30.5)**
Heart Failure n (%)	1 (2.5)	18 (1.5)	0.45	1.73 (0.22-13.31)
EPOC n (%)	0	26 (2.1)	1	0.96 (0.95-0.97)
Corticosteroids n (%)	**28 (70)**	**622 (51.0)**	**0.02**	**2.24 (1.12-4.44)**
Methotrexate n (%)	**17 (42.5)**	**892 (73.1)**	**0.00009**	**0.27 (0.14-0.51)**
Leflunomide n (%)	10 (25)	253 (20.7)	0.51	1.27 (0.61-2.64)
Sulfasalazine n (%)	1 (2.5)	96 (7.9)	0.36	0.30 (0.04-2.21)
Azathioprine n (%)	2 (5.0)	13 (1.1)	0.79	4.89 (1.06-22.43)

Conclusion: Opportunistic infections were more frequent in patients treated with biological drugs than in controls.

The most common opportunistic infection was Herpes zoster. A history of cancer and renal failure, and concomitant treatment with corticosteroids were associated with of opportunistic infections. Methotrexate therapy was not associated with OI.