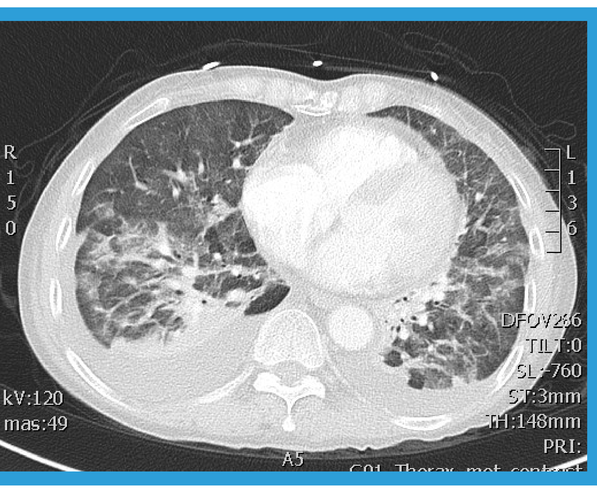

Pneumocystis jirovecii pneumonia in IBD patients treated with immunomodulator(s)

Vieujean S[1], Moens A[2], Rothfuss K[3], Savarino E[4], Vavricka S[5], Reenaers C[1], Ferrante M[2], Rahier JF[6]; ECCO CONFER investigators.

[1]Department of Gastroenterology, University Hospital of Liège, Liège, Belgium
[2]Department of Gastroenterology and Hepatology, University Hospitals Leuven, Leuven, Belgium
[3]Department of Gastroenterology and Hepatology, Robert-Bosch-Hospital, Stuttgart, Germany
[4]Department of Gastroenterology, University of Padua, Padua, Italy
[5]Department of Gastroenterology and Hepatology, University Hospital, Zurich, Switzerland
[6]Department of Gastroenterology and Hepatology, CHU UCL Namur, Yvoir, Belgium

Background

Pneumocystis jirovecii Pneumonia (PJP) is a very rare life-threatening pulmonary fungal infection that occurs in immunocompromised individuals including patients with inflammatory bowel disease (IBD).

Prophylaxis for PJP is recommended in IBD patients treated with triple immunomodulators where one agent is a calcineurin inhibitor or an anti-TNFα[1] but there is no consistency in a preventive approach in patients with double or single immunomodulators.

Our aim was to describe the immunosuppressive treatment profile of IBD patients infected with PJP as well as the outcome of the disease.

Methods

Cases of PJP were retrospectively collected through the COllaborative Network For Exceptionally Rare case reports of the European Crohn's and Colitis Organization (ECCO CONFER).

All ECCO members were invited to report cases of PJP.

Data were collected through a case report form.

Results

A total of 15 PJP infections were reported in 14 patients (10 men and 4 women) with IBD: 9 ulcerative colitis and 5 Crohn's disease.

The median age at PJP diagnosis was 55 years (IQR 44-80). Diagnosis was performed by a positive PJ polymerase chain reaction on the bronchoalveolar lavage in 87% of the cases and by a microscopic direct exam in 7% (unreported in 1 patient). One patient was co-infected by HIV and 57% were non-smokers. Immunosuppressive therapies at the time of diagnosis included steroids (n=11), thiopurines (n=9), infliximab (n=3), cyclosporin (n=2), methotrexate (n=1) and tacrolimus (n=1). Two PJP (13%) occurred in patients on triple immunosuppression, 9 patients (60%) had a double immunosuppressive treatment, 3 patients (20%) were on monotherapy and PJP in the HIV patient occurred in absence of immunosuppressive treatment (Table 1). None of the patients diagnosed with PJP had received prophylaxis.

All patients were treated by trimethoprim/sulfamethoxazole or atovaquone and 5 required an intensive care unit stay. Two patients (14%) died and 1 patient had a recurrent episode 16 months after initial treatment. Evolution was favourable for the others.

Table 1: immunosuppressive treatment exposure in IBD patients at time of PJP (HIV patient excluded).

Immunosuppressive treatment exposure in IBD patients	n=14
Monotherapy	**n=3**
Steroid monotherapy	n=2
Thiopurine monotherapy	n=1
Double immunosuppression	**n=9**
Steroid + thiopurine	n=4
Steroid + infliximab	n=1
Steroid + methotrexate	n=1
Steroid + tacrolimus	n=1
Infliximab + thiopurine	n=2
Triple immunosuppression	**n=2**
Steroid + thiopurine + cyclosporin	n=2

Conclusion

This case series reports PJP in IBD patients while on single or double immunosuppression highlighting the risk in this population. Identifying risk factors for PJP infection in the IBD population is essential to provide a case-by-case prophylaxis.

Reference:
1.Rahier JF., Magro F., Abreu C., Armuzzi A., Ben-Horin S., Chowers Y., et al. Second European evidence-based consensus on the prevention, diagnosis and management of opportunistic infections in inflammatory bowel disease. J Crohn's Colitis 2014;8(6):443–68.