

Pneumocystis Jerovecii in Systemic Lupus Erythromatosus

Tuhin Sultana*

**Department of Laboratory medicine, Bangabandhu Sheikh Mujib Medical University, Bangladesh*

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EDITORIAL

SLE is a chronic connective tissue disorder. It is increasing day by day. It is treated by long time use of steroids which causes immune suppression. Pneumocystis jirovecii affects the long time immune suppressed patients. SLE with diabetes patients are more vulnerable to being infected with Pneumocystis jirovecii. Nowadays there is overwhelming increase in SLE patients in Bangladesh. By sputum examination, average 2-3 SLE patients are diagnosed with Pneumocystis jirovecii in BSMMU, Bangladesh in laboratory medicine department [1-3].

Pulmonary manifestations of connective tissue diseases are a diagnostic challenge to the clinicians. It could be disease related due to immune mediate insult, facilities, pulmonary hemorrhage and pulmonary hypertension or caused by infection. Opportunistic infections with organism like pneumocystis jirovecii frequently complicate immunosuppressive status. The mechanism of immune suppression in patients with SLE who have PCP is usually multi-factorial and may be related to underlying diseases, cytotoxic therapies or malnutrition. However, the development of PCP in most patients with SLE is associated with daily administration of corticosteroids and with the development of lymphopenia. Corticosteroids cause immune suppression mainly by sequestration of CD4+T lymphocytes in the reticulo endothelial system and by inhibiting the transcription of cytokines. Corticosteroid therapy is a rare but possible independent predisposition to Pneumocystis jirovecii infection. Prolonged corticosteroid therapy is characterized by a significant immunological dysfunction [4,5].

Patients with systemic lupus erythematosus (SLE) have increased susceptibility to infection by Pneumocystis jirovecii but this condition has rarely been reported in Bangladesh. Pneumonia is due to Pneumocystis

jirovecii commonly occur in immune compromised hosts. Although it is a treatable infection, it is associated with high motility. Patient with systemic lupus erythematosus has increased susceptibility to infection by Pneumocystis jirovecii [6].

The occurrence of Pneumocystis pneumonia in patient with collagen disease on immunosuppressive therapy is not uncommon. But only a few case reports are available about this infection in active untreated collagen disorders. The diagnosis of PCP is done either by induced or spontaneous sputum analysis, or by carrying out a bronchoalveolar lavage and transbronchial lung biopsy [7,8].

Pneumocystis pneumonia is a fatal disease. It occurs mostly immune compromised patient. The patient response well to the anti-Pneumocystis treatment [9]. The clinicians should be aware that, at some point of time immunosuppressive patients can present with concurrent infections with Pneumocystis jirovecii. As it is increasing day by day so it is alarming for all. We should take precautions to prevent infection by Pneumocystis jirovecii in SLE patients [10].

Corresponding author: Tuhin Sultana, Department of Laboratory Medicine, Bangabandhu Sheikh Mujib Medical University, Shahbag, Dhaka, Bangladesh, Tel: +8801711300400; E-mail: drtsultana@gmail.com

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REFERENCES

1. Barshes NR, Goodpastor SE, Goss JA (2004) Pharmacologic immune suppression. *Front Biosci* 9: 411-420.
2. Farr RW (1992) *Pneumocystis carinii* pneumonia due to corticosteroid. *South Med J* 85(1): 52-53.
3. Toledo AC Jr, de Castro MR (2001) *Pneumocystis carinii* pneumonia, pulmonary tuberculosis and visceral leishmaniasis in an adult HIV negative patient. *Braz J Infect Dis* 5(3): 154-157.
4. Roux N, Flipo RM, Cortet B, Lafitte JJ, Tonnel AB, et al. (1996) *Pneumocystis carinii* pneumonia in rheumatoid arthritis patients treated with methotrexate: A report of two cases. *Rev Rhum Engl Ed* 63(6): 453-456.
5. Silvka A, Wen PY, Shea WM, Loeffler JS (1993) *Pneumocystis carinii* pneumonia during steroid taper in patients with primary brain tumours. *Am J Med* 94(2): 216-219.
6. Sepkowitz KA, Brown AE, Telzaj EE, Gottlieb S, Armstrong D (1992) *Pneumocystis carinii* pneumonia among patients without AIDS at a cancer hospital. *JAMA* 267(6): 832-837.
7. Arend SM, Kroon FP, Wout JW (1995) *Pneumocystis carinii* pneumonia in patients without AIDS, 1980 through 1993: An analysis of 78 cases. *Arch Intern Med* 155(22): 2436-2441.
8. Filoche P, Adoun M, Caron F, Godet C, Robert R, et al. (2006) Co-infection with *Mycobacterium tuberculosis* and *Pneumocystis jirovecii* in a patient without HIV infection. *Rev Mal Respir* 23: 83-87.
9. Koffi N, Ngom A, Danguy EA (1997) Association of *Pneumocystosis* and pulmonary tuberculosis in a HIV negative patient. *Rev Mal Respir* 14(5): 399-400.
10. Takamura N, Kimura A, Hamamoto Y (1975) An autopsy case of lymphosarcom associated with *Pneumocystis carinii*, cytomegalovirus infection, and military tuberculosis. *Bull Osaka Med Sch* 21: 108-118.