Causes and Opportunistic Infection Rate in Systemic Lupus Erythematosus Patients: Comparing Three Decade

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Background: Infection burden, particularly opportunistic infection (OI) among SLE patients is high.

Objective: To determine causes and opportunistic infection (OI) rate and to compare causes of OI in SLE patients in three-time periods, before 1997, 1997-2007, and after 2007.

Methods: We retrospectively reviewed medical records of SLE patients seen at Division of Rheumatology, Chiang Mai University over a 20-year period. Demographics, clinical features, laboratory investigation, treatment, and OI data were recorded.

Results: During the study period, there were 147 (female 138) from 875 (16.8%) SLE patients having 178 events of OI. Their mean±SD age at SLE diagnosis was 33.2±11.9 years. The mean±SD estimated time from SLE diagnosis to OI event was 41.2±5.1 months. 76 patients (51.7%) had OI within 1st year after SLE diagnosis. At one month prior to OI diagnosis, immunosuppressive drugs and corticosteroids were given in 61 (34.3%) of 178 OI events, while corticosteroids alone in 106, and no corticosteroid or immunosuppressive drugs in 11. The mean of prednisolone dose one month prior OI was 26.7±17.5 mg/day. The 3 most common OI were Herpes zoster (64 events, 36.0%), Mycobacterium tuberculosis (34 events, 19.1%), and Pneumocystis jiroveci pneumonia (PJP) (11 events, 6.2%). Whilst, 18 from 178 (10.1%) OI resulted in death. When compared among 3-time periods, the fatal OI events were 9 from 55 (16.3%) before 1997, 1 from 57 (1.8%) during 1997-2007, and 8 from 66 (12.1%) after 2007. The most common cause of fatal OI was Aspergillus spp. pneumonia (5 in 18 events, 27.8%). The different characteristics of patients who had OI among 3-time periods, before 1997, 1997-2007 and after 2007 were mean disease duration from SLE diagnosis to OI (20.1, 37.4 vs 60.0 months, p=0.004), modified-SLE disease activity index at OI diagnosis (11.8, 7.6 vs 6.4, p<0.001), and rate of immunosuppressive drug used (21.8%, 23.6% and 54.5%, p=0.030).

Conclusion: OI rate in Thai SLE patients is high and contributes a high mortality rate. Screening for OI prior to initiation and during immunosuppressive drugs and corticosteroids therapy is crucial.

Keywords: Opportunistic infection, SLE