Review Article

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Systemic Lupus Erythematosus Patients in Egypt with Pleuropulmonary Involvement: Clinical Pattern

Abstract

Aim of the work

To study and dissect the clinical features of Egyptian systemic lupus erythematosus (SLE) cases with pleuro- pulmonary system involvement.

Cases and Method

All SLE cases admitted to the Rheumatology and Rehabilitation inpatient Department, Cairo University Hospitals, during the period from the times 2000 to 2013 were reviewed. Medical records of the cases were revised and data from cases with any clinical, pathological and radiological findings attesting the presence of pleuropulmonary system affection were anatomized.

Results

Pleuro- pulmonary involvement passed in265/402(65.9) cases. Pleurisy was the most common clinical finding in 163(61.5), pulmonary infection in57.7 and pleural effusion in24.5 cases. Less common instantiations were pulmonary hypertension (8.3), interstitial lung fibrosis (4.2) and verbose alveolar haemorrhage (n = 8; 3). The most common clinical symptoms were pleuritis casket pain (50.9) and cough (49.1). The most common bus- antibodies were antinuclear antibodies (Corpus) (94.7) andanti-dsDNA in159/183(86.8) cases. In the present study, the much- cutaneous instantiations was significantly associated with pleuro- pulmonary complaint (p = 0.001). Pulmonary affection was significantly associated with number of medicine input (p = 0.003). Casket infection was significantly related to the presence of other non pleuro- pulmonary infections (p = 0.034). Pulmonary infections were more apparent in cases with pleural effusion (P = 0.001), CNS instantiations (p = 0.002) and positive Corpus (p = 0.007). The number of medicines taken was significantly associated with the prevalence of casket infections (p = 0.002).

Conclusion

Pleuro- pulmonary system is one of the most generally affected systems in SLE. Pleurisy was the most common clinical finding followed by pulmonary infection.

Keywords: Systemic lupus erythematosus • Pleuro- pulmonary • Casket infection • Shrinking lung pattern • Pleural effusion • Lupus pneumonitis

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Introduction

Systemic lupus erythematosus (SLE) is an autoimmune complaint with a complex, multifactorial etiology. It's characterized by multisystem microvascular inflammation with the generation of autoantibodies. Although the specific cause of SLE is unknown, multiple factors are associated with the development of the complaint. In 1904, Sir William Osler reported a 24 time old woman with bilateral pulmonary connection and haemoptysis associated with skin rash, anaemia and nephritis. Latterly on, several distinct pulmonary instantiations with SLE have been reported with a variable prevalence. Pulmonary involvement occurs further generally in SLE than in any other connective towel complaint.

Lungs are generally involved among the other organs in SLE. Damage and dysfunction are substantially intermediated through the action of autoantibodies and vulnerable complex conformation. About 50 of cases with systemic lupus erythematosus will show signs of involvement of the lung, its vasculature, the pleura, and diaphragm at some time during the complaint course. Pleuritic casket pain, coughing, and briefness of breath are frequently the first suggestions to the lung involvement of SLE. Pulmonary involvement is generally in the ultimate course of the complaint. Still, pulmonary illness may be the presenting incarnation of SLE. Any part of the pulmonary system can be affected including airways, lung parenchyma, pulmonary vasculature, pleura and diaphragm. The pulmonary instantiations may range from sub-clinical abnormalities to life hanging diseases. In an necropsy study of 90 cases diagnosed with SLE, the most frequent findings were pleuritis(78), bacterial infections(58), alveolar haemorrhage(26), followed by distal airway differences (21), opportunistic infections(14) and pulmonary thromboembolism(8), both acute and habitual [1].

Former studies carried out in the Middle East have suggested the rate of pulmonary involvement in SLE to range from4.9 to 30, with the most common pulmonary abnormality reported to be pleural effusion. Alamode and Attar lately conducted a retrospective study analysing the data of 184 SLE cases admitted to King Abdel Aziz University Hospital assessing the frequence and independent threat factors for SLE- associated lung abnormalities; pulmonary involvement was present in 33 of the studied cases.

The end of this work was to study and dissect the frequence and clinical features of different pleuro- pulmonary instantiations in Egyptian SLE cases following- up at the Rheumatology Inpatient Department, Faculty of Medicine, and Cairo University Hospitals [2].

Cases and Method

The study included all the SLE cases admitted to the Rheumatology and Rehabilitation Inpatient Department, Faculty of Medicine, Cairo University Hospitals, during the time period from times 2000 to 2013. We anatomized the medical records of the cases admitted from time 2000 to 2010 and recently admitted SLE cases during the time period of the study (2011 – 2013) were examined and their history further anatomized. This disquisition was conducted in agreement with the protestation of Helsinki and was approved by the original Ethical Commission of the Rheumatology Department, Faculty of Medicine, and Cairo University. Cases included during the study period gave their informed concurrence to be enrolled in the study [3].

A map review was carried out for all the included SLE cases that fulfilled the 1982 revised ACR criteria for the opinion of SLE. Demographic data similar as age, coitus, criteria for opinion and any organ or system affected were proved and recorded. The following symptoms, especially those of applicability to the casket were taken into consideration and recorded cough, briefness of breath, haemoptysis, fever, musculoskeletal pain and pleuritic casket pain. All casket X-rays and high resolution motorized tomography (HRCT) reviews were reviewed by a elderly radiologist. Likewise, the presence of the following pleuro- pulmonary instantiations was especially recorded pleural thickening/ effusion, pleurisy (grounded on the presence of pleuritic casket pain with pleural irk or effusion, or pleural thickening), pneumonia, pneumonitis, interstitial lung complaint, bronchiectasis, diaphragmatic dysfunction, pulmonary embolism (PE), adult respiratory torture pattern (ARDS), verbose alveolar haemorrhage (DAH), organizing pneumonia and pulmonary oedema. Echocardiography and pulmonary function tests available for the cases were reviewed and the presence of pericardial effusion was also recorded. Only cases with any clinical, pathological and radiological findings attesting the presence of pleuro- pulmonary system affection were included in the study and further anatomized. Consequently out of 402 cases, the data of the 265 suffering from pleuro-pulmonary instantiations were furtherly anatomized. All material demographic, clinical, laboratories, radiologic and remedial data of these cases were abstracted [4, 5].

Statistical analysis

All data analyses were performed using statistical package for social lores (SPSS, SPSSInc. Chicago, IL, USA; interpretation 16). Means with standard diversions were calculated and range presented for quantitative data. Comparisons between quantitative variables were done using then on-parametric Kruskal- Wallis and Mann-Whitney tests. For comparing categorical data, Chi square test was performed [6].

Discussion

Systemic lupus erythematosus (SLE) is a potentially severe, constantly disabling autoimmune complaint withmulti-organ involvement. Any organ can be affected by SLE and pulmonary involvement occurs further generally than in any other connective towel complaint. During complaint course, up to 50 of

SLE cases will develop lung involvement. Pulmonary instantiations of SLE include pleuritis (with or without effusion), seditious and fibrotic forms of interstitial lung complaint, alveolar haemorrhage, SLS, pulmonary hypertension, airways complaint and thromboembolic complaint [7]. The lungs are generally involved latterly in the course of the complaint in the setting of other organ involvement still; pulmonary illness may be the presenting incarnation of SLE. In the present study, pleuro- pulmonary system affection was present in nearly two- thirds of the SLE cases. The rate of pulmonary involvement in SLE ranged from4.9 to 30 in former studies carried out in the Middle East. Lately determined a 33 frequence of pulmonary involvement and. Reported lung involvement in only21.5 in 2280 SLE cases. The variability in the frequence of pleuro- pulmonary affection could be attributed to rejection of pulmonary infections or the different individual styles used. Muco-cutaneous instantiations followed by arthritis were present in90.1 and70.6 of the cases which is in harmony with a former report. The results were in agreement with former studies from the Middle East set up a high frequence of much- cutaneous and muscular-cadaverous system affection in their SLE studied cases [8]. Renal affection was present in64.5 of the current cases. 35 of SLE cases have clinical substantiation of nephritis at the time of opinion and 50 – 60 developing nephritis during the first 10 times of complaint. Infection is responsible for roughly 25 of all deaths in cases with SLE, making it a leading cause of mortality among cases. It represents one of the loftiest frequentness compared to other studies where the reported prevalence of casket infection ranged from11.7 to40.2. In the current study, a largely significant relation was set up between the presence of casket infection and multiple medicine inputs which are substantially corticosteroids and immunosuppressants. Also the presence of casket infection was significantly associated with the presence of Othernon-pulmonary infections throughout the course of the complaint. This confirms the thesis that not only the underpinning immunological abnormalities are indicted in the high prevalence of infection but also immunosuppressant remedy increases vulnerability to infection. The current results suggests that infection is the most common cause of parenchymal lung complaint in SLE, and should always be suspected in the evaluation of new pulmonary infiltrates until an indispensable opinion is established [9,10].

Conflict of Interest

None

Acknowledgment

None

References

1. Haraoui B. Assessment and management of rheumatoid arthritis. *J Rheumatol Suppl.* 82,2-10 (2009).
2. Bahadori B, Uitz E, Thonhofer R *et al.* omega-3 Fatty acids infusions as adjuvant therapy in rheumatoid arthritis. *J Parenter Enteral Nutr.* 34,151-155 (2010).
3. O'Dell JR. Therapeutic strategies for rheumatoid arthritis. *N Engl J.* 350,2591-602 (2004).
4. Mitchell KL, Pisetsky DS. Early rheumatoid arthritis. *Curr Opin Rheumatol.* 19,278-283 (2007).
5. Birch JT, Bhattacharya S. Emerging trends in diagnosis and treatment of rheumatoid arthritis. *Prim Care.* 37,779-92 (2010).
6. March L, Lapsley H. What are the costs to society and the potential benefits from the effective management of early rheumatoid arthritis? *Best Pract Res Clin Rheumatol.* 15:171-85 (2001).
7. Smolen J, Aletaha D. The burden of rheumatoid arthritis and access to treatment: a medical overview. *Eur J Health Econ.* 2,39-47 (2008).
8. Seidel W, Pierer M, Häntzschel H *et al.* Internist's therapy of rheumatoid arthritis. *Internist (Berl).* 45,693-705 (2004).
9. Mangkorntongsakul V, Phan K, Smith SD *et al.* Pemphigus and rheumatoid arthritis: A systematic review and meta-analysis. *Dermatol Ther.* 34,14845 (2021).
10. Akkoc N, Akar S. Standardization is essential for a more rigorous comparison of rates: comment on the reply by Gilgil, Kacar, and Tuncer. *Clin Rheumatol.* 26,136 (2007).