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Case Report

A 42-Year-Old Man with Thromboembolism After Septoplasty

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Abstract

Systemic lupus erythematosus mainly affects women in the reproductive period of life. According with the age of onset, this autoimmune disease may be classified in juvenile: ≤ 18 years, adult: ≥ 18 and < 50 years, and late onset: ≥ 50 years. This older group can represent up to 20% of the cases, may be less prevalent in females, and evolve with more thromboembolic events and few skin, renal, neurological, and articular manifestations. Although not consensual, the late onset may follow with a less severe course and better prognosis. Herein is described a 42-year-old male with incomplete systemic lupus erythematosus, presenting thromboembolic phenomena during the early postoperative period of an uncomplicated septoplasty procedure. Case reports may enhance the suspicion index about the first manifestations of this disease in adult males.

Keywords: Adult Onset Lupus; Late Onset Lupus; Thromboembolism

Introduction

Systemic lupus erythematosus (SLE) is an autoimmune disease prevalent in females in reproductive ages of life [1-7]. Diagnostic criteria are from Systemic Lupus International Collaborating Clinics (SLICC) or the American College of Rheumatology (ACR) [1,6,8]. Based on the age of onset, SLE is classified in juvenile (jSLE): ≤ 18 years, adult (aSLE): ≥ 18 and < 50 years, and late onset (loSLE): ≥ 50 years [1-7]. Some authors consider early-onset SLE (eoSLE): 18 - 40 years and loSLE: ≥ 50 years, with a gap between 40-50 years [9]; whereas others define loSLE ranging from > 50 to > 65 years of age [3]. Patients with loSLE represent up to 20% of the total of cases [2-4,6,7]. Differing from the younger age groups, loSLE is less prevalent in females, and evolves with more thromboembolic events and few skin, renal, neurological, and articular manifestations [2-4,6,7]. Without consensus, many authors believe that loSLE has less severe course and prognosis [2-7]. Very important is the index of clinical suspicion about this entity that is growing in incidence and, in general, the confirmation of the diagnosis occurs with up to ten years of delay [2,5,6]. The current increase in incidence of loSLE may be related to population aging; therefore, main features of this condition are herein compared with findings in younger groups of patients [2-7,9].

Case Report

A previously healthy 42-year-old male was submitted to elective septoplasty, remaining in postoperative rest for approximately one week, and further suffered pain in the right calf. Because of suspected tendinitis, he started the use of non-steroidal anti-inflammatory drugs. Two days later, he felt tired with moderate efforts, and the symptom rapidly evolved towards dyspnea on minimal efforts; phenomenon that caused his admission to the Emergency service. He denied smoking or illicit drug use, but cited social consumption of alcoholic beverages. On the admission examination, the alterations observed were edema in the region of the right calf and decrease of the vesicular murmur bilaterally, without significant alteration of SpO2. Laboratory and imaging evaluations were performed for diagnostic confirmation of deep venous thrombosis (DVT) and pulmonary thromboembolism (PTE). Doppler of the lower limbs showed signs consistent with DVT compromising the right fibular vein (Figure 1); in addition, the chest angiotomography showed filling failures in several pulmonary segments bilaterally, confirming the diagnosis of PTE (Figure 2). Routine laboratory determinations revealed no significant changes (Table 1), except for d-dimers elevation, which is consistent with the diagnoses of DVT and PTE. Complementary investigation of autoimmune diseases and causes of thromboses included ANA, anti-double-stranded DNA antibodies, anti-RNP, complement, anti-proteinase 3 antibodies, activity of antithrombin III, ASCA IgA, anti-CCP, Leiden V factor, P-ANCA, C-ANCA, anti-SS-B, anti-SS-A, C and S proteins rheumatoid factor, homocysteine, VDRL, viral hepatitis, HIV, and blood lipid profile. Except for the nuclear fine speckled ANA-HEp-2 (1:160), the results were within the normal ranges.

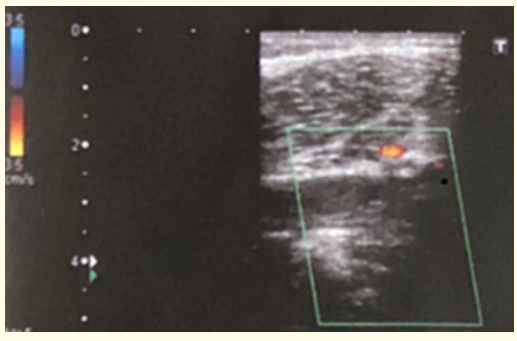

Figure 1: Eco-Doppler of lower limbs showing the enhanced diameter of the right fibular vein without blood flow, and the presence of ecogenic material within the venous lumen.

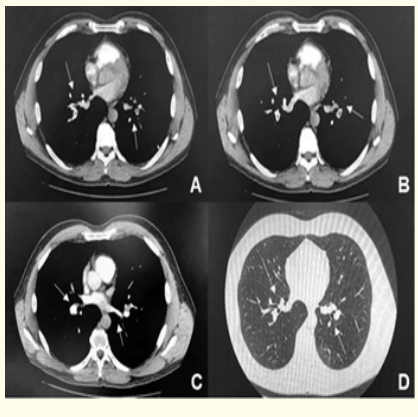

Figure 2: Computed angiotomography, showing multiple filling defects in segmental arterial branches of the lungs (arrows), consistent with bilateral acute pulmonary thromboembolism. The pulmonary arterial trunk and main arteries were patent, without evidence of thrombi.

The patient underwent full schedule of low-molecular-weight heparin (1 mg/kg, twice daily) and, in D2, the swelling observed in the right leg had significantly regressed. Asymptomatic and with normal respiratory evaluation in D5, the patient was discharged to home with prescription of dabigatran etexilate (150 mg twice daily, for six months). Additionally, he was advised to maintain close contact with his medical assistants because any eventual symptom or systemic alteration must be identified at the earliest possible time.

Discussion

The male adult herein described presented with two significant thromboembolic episodes during the early postoperative period of an uncomplicated septoplasty procedure. Worthy of note, he underwent an orthopedic surgery 17 years before, without complications. The surgical procedures for herniated disc involves higher risk for thromboembolism than septoplasty, and he remained in absolute postoperative rest for much longer period of time; as no thrombosis occurred, one might hypothesize that thrombophilia developed with his aging. However, the risk of this phenomenon is found increasing each year over 50 years old [10]; then it could play some role in thromboembolic phenomena affecting individuals with loSLE.

The chance of post-surgical thromboembolic events enhances with the duration and type of surgery, and the vascular and orthopedic procedures are those with higher risks [11]. According to Okuhara., *et al.* patients submitted to vascular and orthopedic surgeries and categorized as of low risk had a prevalence for venous thromboembolism of 8.4 and 16%, respectively; whereas the prevalence in the group of very high risk was 44.6 and 61.7% [12].

Laboratory and imaging exams on admission included blood count and biochemistry, coagulation tests, d-dimers, electrocardiogram, and Doppler ultrasound of the lower limbs. The images of multiple filling defects, increased diameter without blood flow, and echogenic material within the right fibular vein were consistent findings with the diagnosis of DVT. Immediately, the computed angiotomography study was performed, and identified multiple filling defects in diverse segmental arterial branches of both lung fields. The findings were consistent with diagnosis of bilateral PTE, without any evidence of parenchymal involvement. Our concern was about the hypothesis of unsuspected thrombophilia causing DVT and PTE. Complementary tests were unremarkable, except for serological panel showing ANA (1: 160) with nuclear fine speckled pattern that has been prevalent among individuals with loSLE [2]. Jeleniewicz., *et al.* found ANA with this pattern in100% of the loSLE group (8.7%) diagnosed in 230 SLE patients; 80% were woman and the mean diagnostic delay was 31.7 months [2]. Moreover, loSLE patients are often male with less cutaneous and articular manifestations, and more thromboembolic phenomena if compared with patients of other age groups [2-4,6,7].

Worthy of note, this male was 42-year-old, and loSLE appears at the age ≥ 50 years. In addition, people with three ACR criteria are not classified by SLICC criteria, and may be designated as incomplete SLE, constituting a slightly older group with limited disease [8]. Therefore, the authors consider useful to comment the results of some studies about comparative clinical and laboratory features of SLE patients categorized by age ranges. Aljohani., et al. compared data of 86 patients with loSLE and mean age of 58.05 ± 7.30 years (84.9% females); and 169 patients with eoSLE (18 - 40 years) and mean age of 27.80 ± 5.90 years (86.4% females). The loSLE group had lower number of ACR criteria, less renal and neurologic manifestations, as well as less anti-dsDNA positivity [9]. Over five years, the loSLE patients presented more cardiovascular, renal, and ocular damage, as well as higher prevalence of cardiovascular risk factors. Although the loSLE individuals may have milder presentations with less active disease, they can further evolve with more organ damages [9]. Bundhun., *et al*. compared clinical data between 1560 cSLE and 8701 aSLE patients and found more aggressive course in cSLE. Pleuropulmonary involvement, Raynaud phenomenon, and photosensitivity and were more common in aSLE patients; whereas seizures, vasculitis, hematological disturbances and renal involvement were more frequentin cSLE patients [13]. Das Chagas Medeiros., *et al*. done a cohort study of 414 SLE patients, and93.5%were female; adult onset (aSLE) 338 (81.6%), childhood onset (cSLE) 60 (14.5%), and loSLE 16 (3.9%). The female/male ratio was 6.5:1 in cSLE, 16.8:1 in aSLE, and all loSLE patients were female. Cardiovascular diseases were prevalent in loSLE group, but anti-dsDNA, anti-Sm, and antiphospholipid antibodies, damage accrual, remission, and mortality rate were similar [14]. Fonseca., et al. compared clinical presentations and outcomes of 204 SLE patients, 38 (18.6%) jSLE and 166 (81.4%) aSLE; 91.7% were female, the mean age was 46.1 ± 15.4 years, and the mean disease duration was 17.1 ± 10 years [15]. Malar rash, oral ulcers, neurological manifestations, nephritis, hemolytic anemia and leukopenia were more prevalent in jSLE; whereas arthritis and irreversible damage were more often observed in aSLE patients [15]. Kang., *et al*. evaluated 117 SLE patients at the time of renal biopsy showing lupus nephritis; juvenile-onset (joSLE): ≤ 18 years, adult-onset (aoSLE): 18 - 50 years, and loSLE: > 50 years. Of the total, 20 (17.8%), 84 (71.3%), and 13 (10.9%) were joSLE, aoSLE, and loSLE patients, respectively. During a mean follow-up of 76.5 months, the development of chronic kidney disease and death were higher among loSLE patients; therefore, this elderly group of people should be more carefully monitored with the purpose of avoid poor outcomes [16]. Sassi., *et al.* done a cross-sectional study including 598 SLE patients (550 female); 419 (70%) were aSLE, 90 (14.8%) were loSLE and 89 (14.8%) were cSLE. The female to male ratio was higher in aSLE (18:1). Arthritis predominated in aSLE (78.5%) if compared with loSLE (57.7%), whereas nephritis was more frequent in cSLE (60.6%) than in loSLE (26.6%) [17]. Sohn., *et al*. compared clinical and laboratory data of loSLE with aSLE in a total of 917 patients. The cumulative ACR criteria in loSLE (n = 32, 3.5%) was lower than in aSLE (4.6 ± 1.2 vs. 5.5 ± 1.4). The percentage of patients with low complement was lower in loSLE than in aSLE; loSLE had fewer number of ACR criteria and less disease activity than aSLE; organ damage was similar to aSLE, but outcome and mortality rate were more favorable [19]. Sousa., *et al.* evaluated 267 SLE patients with mean disease duration of 11.9 ± 9.3 years. Skin (62%), kidney (58%), neurological (11%) and hematologic changes (76%) were more common in cSLE, and disease activity was higher in this group than in aSLE and loSLE. There was a significant delay in the diagnosis of SLE in older groups, because disease onset was more indolent. Co-morbidities as hypertension, diabetes and thyroid disease were more frequent in loSLE, as well as irreversible damages with implications on management [19].

Worthy of note are studies about thromboembolic risks in patients with SLE [1,20]. Aviña-Zubieta., *et al*. evaluated the incidence of DVT, PE, and VTE in 4863 SLE patients, 86% women, and mean age of 48.9 years, compared with non-SLE controls, and found that the SLE group had significant increased risk of VTE mainly in the first year of diagnosis [20]. They commented the multifactorial mechanisms of VTE in SLE, including reduced mobility, systemic inflammation, venulitis, antiphospholipid antibodies, and use of glucocorticoid [20]. There was 4-fold increased risk of DVT and 3-fold increased risks of PE and overall VTE; the authors emphasized preventive measures and anticoagulation for this high-risk patients [20]. Chung., *et al.* compared data of 13084 SLE patients (87.9% women; mean age of 35.6 years) with 52336

controls followed for 90237 and 379185 person-years, respectively [1]. The risks of SLE patients to develop DVT and PE were 12.8-fold and 19.7-fold higher, respectively, than those of the control cohort. Differing from other studies, SLE patients aged ≤ 35 years had the highest risks of developing DVT and PE. The authors concluded that risks of these complications were significantly higher in SLE patients than in the general population [1]. They highlighted the role of chronic inflammation and procoagulants, as well as decrease of anticoagulants and fibrinolysis, in addition to antiphospholipid syndrome in SLE patients [1].

Conclusion

The patient herein reported with aSLE was diagnosed at the age of 42 years, without co-morbidities or irreversible damages usual in older age based on SLICC/ACR damage index. The unique manifestation was thrombophilia, characterized by a postoperative episode of DVT and PTE, which was successfully controlled by the exclusive anticoagulation schedule. The diagnostic suspicion of incomplete SLE was based on clinical and laboratory findings, but the patient has been closely followed in order to detect eventual flare up of other changes. Case reports may enhance the suspicion index about first manifestation of SLE in old males. Further studies about mechanisms of DVT and PE in SLE patients should be also performed.

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Conflicts of Interest

The authors have no potential conflicts of interest to disclaim.

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