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Introduction

Systemic lupus erythematosus (SLE) is a chronic autoimmune disease involving multiple organ systems. Due to the nature of the disease, as well as the treatment modalities that can cause immunosuppression, patients with SLE are more susceptible to infections. Life-threatening bacterial sepsis with pathogenic and apathogenic microorganisms may occur in immunosuppressed patients. Early diagnosis and appropriate treatment is critical and life saving in this group of patients.

Clinical Case

A 48-years-old female presented with left gluteal pain, swelling, and redness associated with fever and chills for several days. The patient was diagnosed with SLE 15 years ago and was on chronic prednisone therapy of 10 mg per day, occasionally increased to 20 mg daily for few days in flare up. She reported to be on an unknown medication for lupus in the past which she discontinued due to side effects. The main manifestation of lupus was malar rash; she denied tenderness and swelling of peripheral joints. Significant past medical history included diabetes mellitus, hypertension, and chronic anemia.

In the emergency room the patient was found to be hypotensive (BP 85/49), tachycardic (HR 105), and febrile (102.5° F). Physical examination revealed left buttock erythema and tenderness extending from the entire left buttock to the left labium and mons pubis anteriorly. Heart and lung examinations were normal. Initial labs were significant for leukocytosis, 29 (4.8-10.8 K/uL), neutrophils of 78%, and bandemia of 17%, platelets of 121 (130 - 400 K/uL). Her HbA1C was 7.8% and hematocrit and hemoglobin were normal. Autoimmune antibody panel was significantly positive for antinuclear antibody titers (1:640) with homogenous pattern, low C3 complement (86 mg/dL), and positive ds-DNA antibody (Table 1). Liver and kidney functions were within normal limits. Urine analysis showed WBC of 7/HPF, urine micro-albumin 11.9 mg/L with no RBC and protein. The patient was admitted for severe sepsis. Sepsis protocol was initiated and she responded to fluid resuscitation.

On CT scan of the pelvis with contrast, a massive gluteal abscess was identified measuring 5.3 x 1.8 cm in the left perineum with diffuse subcutaneous edema throughout the left gluteal region consistent with cellulitis (Figure 4). Patient underwent emergent incision and debridement of the perineal abscess with 5cc of purulent drainage. The site was packed with iodoform gauze and she was started on intravenous antibiotic therapy with ceftazoline, meropenem, and clindamycin. Wound culture was positive for Methicillin-resistant *Staphylococcus aureus* and blood culture was negative after 5 days of incubation. A significant improvement was seen clinically and in her laboratory values (Table 2) following treatment. She was discharged home on doxycycline and rifampin for 14 days along with instructions for sitz bath and daily packing changes. Prednisone was continued to control her lupus symptoms.

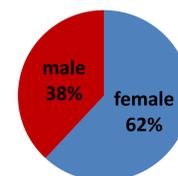
Table 1. Immunology	
Anti Nuclear Ab (ANA): positive 1/640 homogenous pattern	Rheumatoid factor: negative
Ds-DNA Ab : 10 IU/mL	Anti-SSA: negative
C3: 86 (normal 88-165 mg/dL)	Anti SS-B: negative
C4: 16 (normal 14-44 mg/dL)	HIV Ab: negative

Table 2. WBC trend during 1 week course of treatment

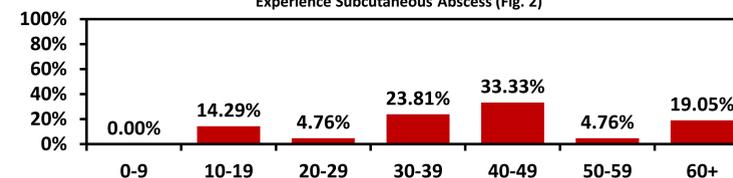
29→26.9→8.3→6.6 K/uL

Systemic Lupus Erythematosus and Subcutaneous Abscess- Summary of 21 Cases from FDA Reports (Figure 1,2,3)

Gender of people who have Systemic Lupus-Erythematosus and experience Subcutaneous Abscess (Fig. 1)



Age of People Who Have Systemic Lupus-Erythematosus and Experience Subcutaneous Abscess (Fig. 2)



Most Common Drugs (Fig. 3)

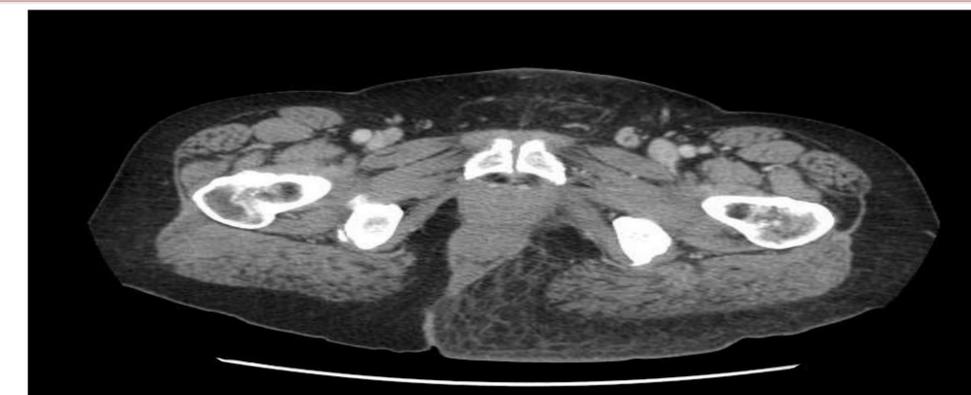
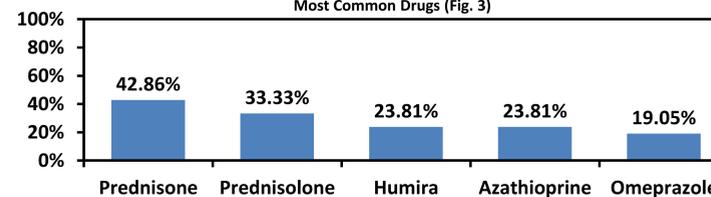


Figure 4. CT scan of the pelvis with contrast showing a left perineal abscess with diffuse subcutaneous edema of the left gluteal region.

Discussion

This case illustrates the importance in recognizing unusual primary sources of infection in immunocompromised patients with SLE, especially those on immunosuppressive therapy. Although rarely reported, gluteal abscess should be considered as a differential diagnosis of bacterial infection source in SLE patients with septic features.

There are few articles reporting MRSA abscesses in SLE patients. In García Hernández *et al.* [2], three out of a cohort of 552 patients with a diagnosis of SLE were found to have iliopsoas muscle abscess. Aseptic necrosis of the femoral head and low back pain due to sciatica was reported as complications of gluteal abscess [3,4].

Conclusion

As per literature review (Figures 1, 2, &3), subcutaneous abscess was found among people with lupus, especially in patients who are female, 40-49 years age group, those taking prednisone, and have rheumatoid arthritis. A retrospective case-controlled study identified that low C3 levels, recent hospitalization, and prednisone dose at time of infection are risk factors for acquiring drug-resistant bacteria in patients with SLE [5].

In summary, SLE might be considered as a risk condition for the development of gluteal abscess, due to the immunosuppression inherent in the disease and its treatment. Careful titration of steroids and other immunosuppressive medications to control disease activity will remain a challenging dilemma until new medications for SLE are developed.

References

1. Systemic lupus erythematosus and Subcutaneous abscess - from FDA reports
2. García Hernández, F. J., J. Sánchez Román, C. Ocaña Medina, L. Mateos Romero, J. Molinillo López, and I. Wichmann. Iliopsoas abscess and systemic lupus erythematosus. *An Med Interna* 2003 April; 20(4):198-200. PMID: 12768835
3. Yoshino Y, Hirohata S, Takeuchi A, Hashimoto T (1994). Gluteal abscess caused by Staphylococcus aureus in a patient with systemic lupus erythematosus. *Ryumachi*, Aug; 34(4): 786-9. PMID: 7974031
4. Shames, J. L., & Fast, A. (1989). Gluteal abscess causing sciatica in a patient with systemic lupus erythematosus. *Arch Phys Med Rehabil*, May;70(5):410-1 PMID: 2719548
5. Barrera-Vargas, A., Gomez-Martin, D., Merayo-Chalico, J., Ponce-De-Leon, A., & Alcocer-Varela, J. (2014). Risk Factors for Drug-resistant Bloodstream Infections in Patients with Systemic Lupus Erythematosus. *The Journal of Rheumatology*, 41(7), 1311-1316. doi:10.3899/jrheum.131261.