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Case Report

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Expectant hypercoagulability in chronic disease states, an overlooked diagnosis

Abstract

A 39-year-old Asian female, is a known case of Ulcerative colitis, Psoriasis and psoriatic arthritis. Five hours later to the cannula removal, she develops a blister, at the site of a cannula inserted for rehydration. A preliminary clinical diagnosis of superficial venous thrombosis was proposed. Ulcerative colitis and Psoriasis have been associated with hypercoagulability; however clinical workup failed to support this etiology; as her INR was 2 and ESR was 14, coagulation studies were within normal range. The noteworthy clinical presentation at cannulation, formation of bullae, or lack of expected hypercoagulability in our patient remains unexplained, since it cannot be attributed to the known risk factors of superficial venous thrombosis, Thrombophlebitis, Hypercoagulability or dermatological lesions instigated by ulcerative colitis, psoriasis, or the side effects of the medications she consumes.

Keywords: hypercoagulability, ulcerative colitis, psoriasis, cannulation

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Case

A 39-year-old Asian female develops a blister, at the site of a cannula inserted for hydration with normal saline. The lady had a recent history of dehydration due to an outdoor summer lunch on a hot day. Her past medical history includes Ulcerative Colitis, Psoriasis, and Psoriatic arthritis for the last decade. The large blister ruptured, exposing the underlying dermis. She was prescribed saline washes with application of Fusidic acid ointment, twice daily (Figure 1). The lesion responded initially, but after two weeks, the edges of the lesion became hard, indurated and crusted and the underlying dermis showed a darkened pigmentation with pain on palpation of the snuff box underneath. A preliminary clinical diagnosis of superficial venous thrombosis was proposed; but refuted when the coagulation studies and INR appeared normal. A trial of an ointment containing hydrocortisone, Neomycin, Bacitracin, and Polymyxin for local application, and oral Vibramycin failed to show any improvement in closing the wound, or receding the central black pigmentation, and the patient continued to complain of wrist pain. An X-ray revealed local bone lucency under the lesion (Figure 2). A surgical consult was requested that excavated the necrotic tissue and closed the edges neatly by eleven stiches in local anesthesia administered to the patient (Figure 3).

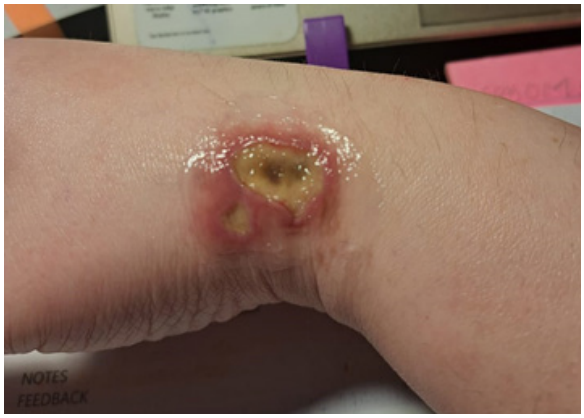

Figure 1 Large blister which developed at the site of cannulation, ruptured revealing the underlying dermis.

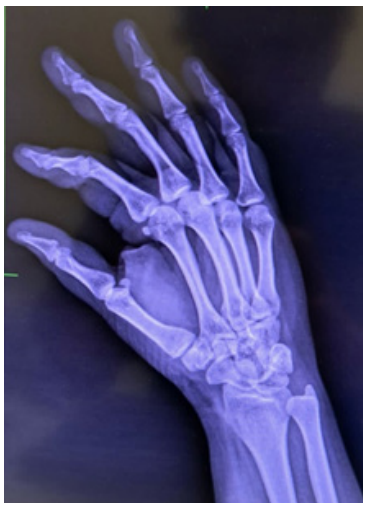

Figure 2 Xray of hand revealing a local bone lucency at the region beneath the blister formation.

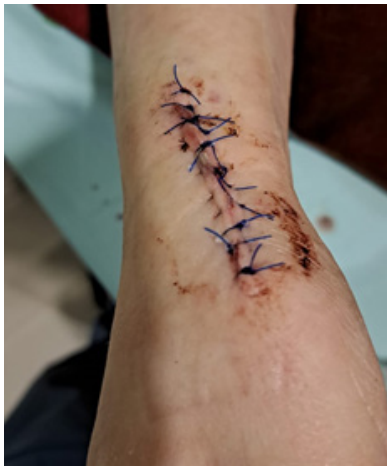

Figure 3 Necrotic tissue was excavated and the edges were closed neatly by eleven stiches.

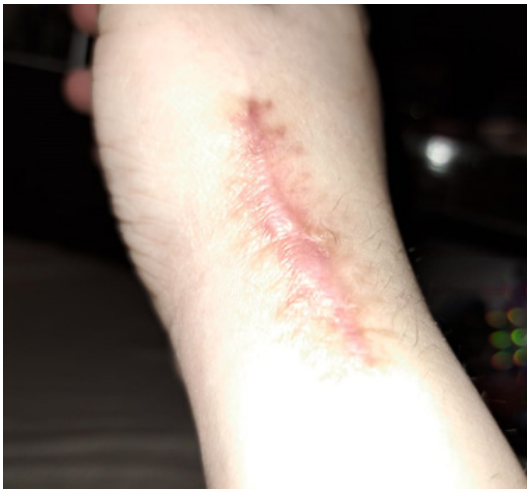

Figure 4 Improved appearance of wound seen three weeks post surgery.

Discussion

The patient was diagnosed with Ulcerative Colitis at the age of 17, Psoriasis at 27 and psoriatic arthritis at 29. She uses clobetasol propionate, coal tar for Psoriasis, takes Mesalamine for Ulcerative Colitis; and occasional steroids for relapses of her chronic diseases. Her family history of coronary vessel disease includes Atorovastin and valsartan for high blood pressure and cholesterol. The patient does not use oral contraceptive pills, maintains proper glycemic control, does not have any history of pregnancy, is compliant, follow ups with her doctors regularly and exercises to challenge her body to remain healthy.

Risk factors for hypercoagulable states such as thrombophlebitis or superficial venous thrombosis such as hyper Homocysteinemia,[1] oral contraceptive use,[2] comorbidities such as diabetes mellitus,[3] malignancy,[3] pregnancy,[2] concurrent deep venous thrombosis,[4] pulmonary embolism, varicose vein[4] cannot be accountable for the skin blistering in this patient. The patient does not have any of these known risk factors that could be associated with the development of Thrombophlebitis; exclusively Teflon intravenous catheters[5] and Longer indwelling time for intravenous catheters[6] related risk factors.

Both Ulcerative colitis and Psoriasis have previously been associated with hypercoagulability. A case report of an Ulcerative Colitis patient demonstrated a link with hypercoagulation, as the patient developed thrombophlebitis migrans coinciding with a flare-up of underlying ulcerative colitis. Treatment targeting the colitis led to resolution of the hypercoagulable state.[7]

Similarly, a retrospective study conducted at Roger Williams General Hospital established a connection between psoriasis and hypercoagulation. The study found a significantly higher occurrence rate of occlusive vascular disease in psoriatic patients compared to non-psoriatic patients.[8]

In our current case, we suspected that the patient's hypercoagulable state, triggered by her chronic diseases, might be the cause of her SVT development. However, relevant tests to diagnose hypercoagulation did not support this suspicion, as her INR was 2. This finding contradicted our initial assumption. It is remarkable that there are several cutaneous manifestations of Inflammatory Bowel Disease (IBD), in up to fifteen percent of patients including Erythema Nodosum, Pyoderma Gangrenosum, Sweet Syndrome, and oral aphthous lesions.[9] The patient's lesion did not resemble any of these conditions. The unique response to cannulation observed, the formation of bullae, in our patient remains unexplained, as it cannot be attributed to the known risk factors of Thrombophlebitis, Hypercoagulability, dermatological lesions instigated by Ulcerative colitis and psoriasis, or the side effects of the medications she consumes. Chronic diseases like Colitus and Psoriasis are both hypercoagulabile states, and the patient was expected to clot easily; furthermore thrombophlebitis is considered to be a prodromal of UC,[10] and no such relapse of the disease occurred in our patient. The INR continues to be normal.

Conclusion

The educational goal of the case report is that all IBD and Psoriasis patients, should be investigated for coagulation, routinely; preventing complications of the chronic duo. Surgical management was wisely initiated and the patient stayed at rest.

Acknowledgments

None.

Conflicts of interest

The authors declare no Conflicts of interest

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