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A Case of Severe Iatrogenic Cushing's Syndrome Followed by Adrenal Crisis, Multifocal Pneumonia, Sepsis, Pulmonary Embolism and Prolonged Adrenal Insufficiency

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Abstract : Background: Endogenous Cushing's syndrome is a rare disease, but iatrogenic or drug related Cushing syndrome from glucocorticoid products is commonly seen in clinical practice. With high dose and long term use of glucocorticoids, patients can develop isolated hypothalamic-pituitary-adrenal (HPA) suppression, or HPA axis suppression can be accompanied by overt iatrogenic Cushing's syndrome. This is a rare case where severe Cushing's syndrome developed from an unknown medication and was followed by severe and prolonged adrenal insufficiency and multiple potentially fatal complications. Case: This is a 37-year-old woman who is presented to Emergency Room (ER) with shortness of breath and chest pain. Four months prior to this presentation the patient was a generally healthy woman who was looking for improvement in her appearance and visited local Rejuvenation Clinic. After initial consultation with a nurse, she was contacted by a physician over the phone and was advised to start taking multiple injectable medications that will arrive by mail. Medications without any labels on bottles were delivered and the patient started daily intramuscular injections. Over the next two months, she noticed rounding of her face and swelling around her eyes. She gained 20 pounds, mostly abdominal fat and became extremely fatigued. Her muscles on legs were visibly decreasing in size and she felt significant muscle weakness. Unexplained bruising occurred. She started growing hair on face and developed secondary amenorrhea. New severe back pain started. She developed depression and headaches. Finally, over a few days, a number of red-purple stretch marks that were sensitive and painful appeared over her abdomen, upper part of arms and legs. She then became suspicious that these dramatic symptoms are caused by injectable medication and she discontinued injections. Over the next few days she presented to ER with low blood pressure and oxygen saturation of 75%. Studies revealed extensive pneumonia as well as multiple pulmonary emboli. Her white blood count was elevated with 32 000 and she also had acute kidney failure on admission. She was treated for sepsis and was also given stress dose steroids. Steroids were tapered over 48 hours and discontinued. After being discharged to home, on her first visit to endocrinology clinic she had undetectable ACTH of < 2pg/mL and undetectable 8am cortisol of < 0.2mcg/dL. She did not respond to an intramuscular injection of cosyntropin 250mcg and her repeated cortisol after 60 minutes was only 1mcg/dL. The patient was diagnosed with adrenal insufficiency and was started on hydrocortisone 20mg+10mg. It took close to 2 years of slow tapering for recovery of this patient's HPA axis and resolve all the sequelae from Cushing's syndrome. Conclusion: Misuse and abuse of glucocorticoids have been present almost since these medications were discovered. This is a rare case where not only severe Cushing's syndrome in full clinical picture developed but also the patient suffered multiple potentially fatal complications and prolonged adrenal insufficiency. Visits to herbal, rejuvenation, esthetic, and similar clinics are becoming more and more popular and physicians need to be aware of possible non-benign nature of medications that their patients may be using.

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