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Appendicitis Hidden under the Facade of Addison's Crisis: A Case Report

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Abstract:- The clinical picture of Addison's crisis closely simulates that of Acute abdominal Inflammatory diseases. Hence, a differential diagnosis between Addisonian Crisis and Acute Abdominal Inflammation can be confusing and difficult. This is not to say both cannot present in a patient at the same time which can complicate reaching an accurate diagnosis even more. Below is one such case.

I. INTRODUCTION

➢ *Case Report*

A 36-year-old Indian Female presented to the Emergency department being referred from a local clinic with complaints of recurrent episodes of vomiting (6+ times a day) of 2 days duration, severe hypotension, and signs of Acute abdomen. On examination, she was found to be sick looking, with cold clammy extremities, dry oral mucosa, yellowish discoloration in her skin and sclera, and hyperpigmentation on her lips and tongue creases. Her Vitals read: BP 79/52, O2 98%, Pulse 102bpm, and a BMI of 18.9. Blood and urine tests were done, and the results are as follows revealed (Reports not given in the table were of normal values):

Table 1: Laboratory Results on Admission

TEST	RESULT	REFERANCE RANGE
Hb	8.8	12.3 – 15.3
GMT	42	<100
CRP	36.3	<10
pH	7.28	7.35 – 7.45
PT	21.10	10-16
PTT	80	30-30
ALT	26	<33
AST	48	<35
T4 (free)	0.79	0.9 – 1.76
Potassium	3.5	3.6 – 5.2
Calcium	1.25	8.5 – 10.2
HCO3	18	22 – 28
Procalcitonin	1.97	0 – 0.5
Cortisol	1.56	AM 5.27 – 22 PM 3 – 10
Urine Glucose	++++	-

The ultrasound Report was uneventful and the X-Ray report showed a Right IVC filter.

Based on the reports and physical examinations, diagnoses of Addisonian crisis, Hypovolemic shock, Acute gastritis, dehydration, Hypoglycemia, and Hypocalcemia were made.

She was admitted to the Intensive care unit on an urgent basis and was started on liberal Intravenous Fluids and Systemic steroids under close hemodynamic monitoring. As she continued to have low blood pressure despite Fluid resuscitation and systemic steroids, Noradrenaline and later Vasopressin infusions were started by the Intensivist. Hypoglycemia and Hypocalcemia were corrected. An Arterial line was inserted for blood pressure monitoring and the bladder was catheterized for close monitoring of Urine output. Steroids were continued upon the advice of the Endocrinologist.

She was noted to have thrombocytopenia during the ICU stay. She was asymptomatic with a normal coagulation profile (ruling out Disseminated intravascular coagulation). The possibility of drug-induced Thrombocytopenia (Ceftriaxone) was considered. Ceftriaxone was discontinued and follow-up labs revealed an increase in platelet count.

CT with contrast was done and it revealed an Inferior vena cava filter, but no features of Adrenal structural abnormality.

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She improved with this line of management in the next 2 days; her blood pressure got stabilized, Noradrenaline& Vasopressin infusions were tapered off, dehydration was corrected, and normal urine output was maintained. IV steroids were slowly replaced with Oral Steroids, which she tolerated well. Platelet count increased to 77,000 with no features of increased bleeding tendency. She was discharged with the advice to continue medications as advised.

The need for Lifelong steroids, double prednisolone dose during stress, intravenous hydrocortisone before major surgeries, increasing salt consumption, adequate hydration, and avoiding fasting were explained upon discharge.

On the day after discharge, the patient returned with Severe lower abdominal pain and continuous episodes of vomiting a few hours after discharge despite being on medications to correct the previous diagnoses. The patient was admitted and a CT abdomen was Done in which An inflamed appendix was shown. She was consulted by the surgeon and an emergency appendectomy was done. After stabilization, she was discharged and sent home with advice to continue medications as advised.

II. CONCLUSION

It is important to note that the Abdominal features of Addison's Disease can take on the features of Acute Abdomen; presenting with sudden onset abdominal pain along with nausea and vomiting. Thus, Addison's disease should not be ruled out in patients presenting with acute abdomen and Acute abdomen causing conditions should not be ruled out in Addison's disease.

Multiple studies have shown similar presentations where Both disorders presented at the same time or where one preceded another causing difficulties in finding an accurate diagnosis and leading to delayed treatment. In this case, the symptoms of the patient were suspected to be due to an inflamed Appendix. But since the Ultrasound Abdomen was shown to have unremarkable results, Appendicitis was ruled out and the patient was diagnosed with Addison's disease after confirmation via laboratory investigations. Since she returned with the same abdominal symptoms, a decision to do CT was done where the missed Inflamed Appendix was found.

It is important to always correlate both disorders because even though Addison's is a rare disease, Acute Addisonian crisis, if not treated promptly, can lead to death.

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