Can't Miss Kounis When Managing Anaphylaxis

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Introduction

When evaluating a patient for hypersensitivity reactions, well prepared emergency physicians are always on high alert for severe and lethal complications, usually involving airway compromise and anaphylactic shock . One of the complications not often discussed is Allergic Acute Coronary Syndrome, or Kounis Syndrome. This cardiovascular collapse can daunt and overwhelm those who may not have been exposed to it, whether in practice or through literature review.

Case Description

A 20 y/o female with hx of pyelonephritis presented to the ED with lip swelling and pruritus. She stated having lower lip swelling with an itchy rash on the right arm, associated with tightness of her throat. She denied difficulty swallowing, trouble breathing, nausea, vomiting, diarrhea, and chest pain. She also stated she does not have any known allergies and denied new foods, soaps, shampoos and medication. She has never had a reaction like this before and was scratching her right arm during presentation. She was able to ambulate around ED with ease, no stridor noted.

Physical Exam:

- A&O x 3, well developed, well nourished, no acute distress.
- Mouth/Throat: Oropharynx clear and moist, no oropharyngeal exudate. No posterior pharyngeal edema or swelling observed.
- All other aspects of PE within normal limits

Assessment: 20 yo female w/ no hx of allergies presents with itchiness and lower lip swelling

Plan: Obtain IV access, Epi 0.5mg IM, famotidine 20mg IV, diphenhydramine 50mg IV, dexamethasone 12mg IV, NS Bolus 1 L

ED Course

5/5 2100: Pt started on epi 0.5 mg IM, famotidine 20 mg IV, diphenhydramine 50 mg IV, dexamethasone 12 mg IV & 1 L NS bolus

5/5 2200: Called over by nurse: Pt is currently minimally responsive, pale, alert only to painful to stimuli

Plan: NRB on 10L O2, Add NS bolus 1 L w/ pressure bag, Order labs

5/5 2257: Pt continues to be hypotensive and now has wheezing and crackles bilaterally

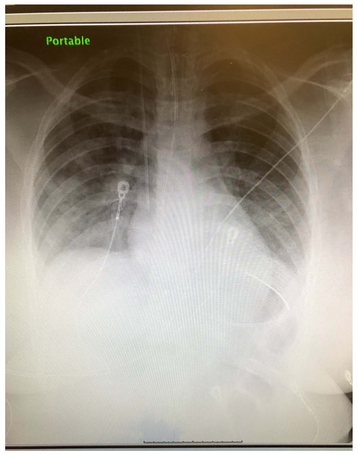
Plan: Add NS bolus 1 L, epi 0.5 mg IM, ipratropium-albuterol 0.5-2.5 mg/3 mL inhalation

5/6 0100: Bedside ECHO shows good EF, concentric squeeze of ventricle, no right sided heart enlargement, no significant mitral valve regurg. Pt is now spitting up red frothy sputum and still hypotensive. Pt appears to have diffuse pulmonary edema

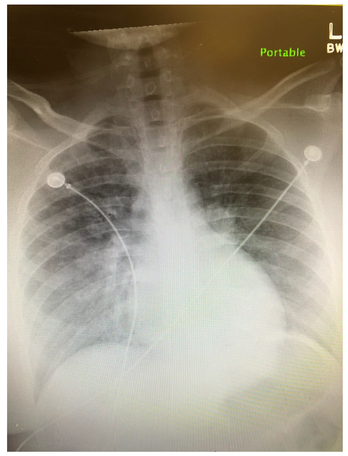
Pt is still spitting up frothy sputum

Plan: intubate and admit to CCM

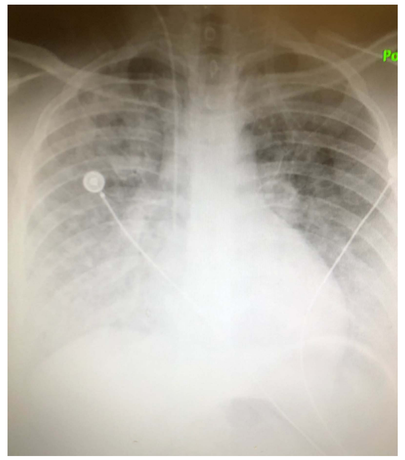
Pertinent Labs/Images/Studies



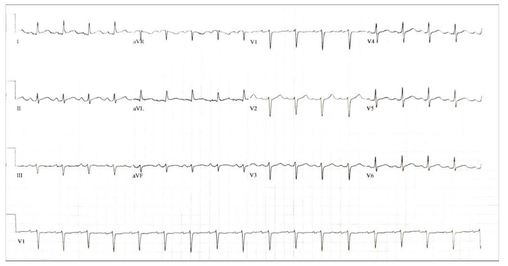
5/5 2342: XR Chest



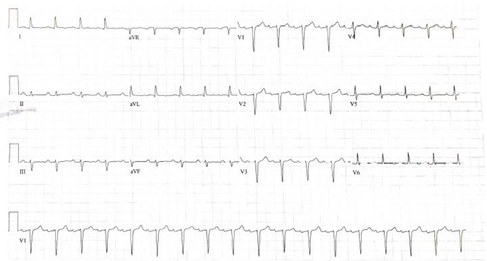
5/6 0124: XR Chest



5/6 0223: XR Chest



5/5 2231: EKG



5/5 2342: EKG

Discussion

Despite receiving adequate management for a hypersensitivity reaction, this patient's condition advanced to severe cardiac complications secondary to allergic reaction. If Kounis Syndrome is not considered during anaphylaxis management, it can lead to lethal and permanent consequences for patients due to necessary alterations to treatment protocol[1]. Coronary artery spasms caused by inflammatory substances disrupt blood flow, creating a constellation of symptoms identical to unstable angina[2,3]. Contrary to typical ACS guidelines, beta blockers, morphine, and other commonly used medications that manage ACS symptoms must be avoided when treating and managing a patient with suspected Kounis Syndrome[4,5]. A pathological and systematic approach can be made when treating patients to improve patient outcome and mortality[6].

References

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