

Differentiation Syndrome In Patients With Acute Promyelocytic Leukemia

Nusiba Elamin¹, Farah Rashid¹, Mohammad Suhail Afana¹, Honar Cherif¹, and mohamed yassin²

¹Hamad Medical Corporation

²HMC NCCCR

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Abstract

A 48-year-old male diagnosed with Acute promyelocytic leukemia (APL) started on all-trans retinoic acid and arsenic trioxide, developed typical symptoms of differentiation syndrome, and improved dramatically on steroids. Hence, any APL patient started on chemotherapy, needs to be monitored closely for developing differentiation syndrome and to start steroid upon suspicion.

Case Image

Differentiation Syndrome In Patients With Acute Promyelocytic Leukemia

Authors: Nusiba H. Elamin^{1*}, Farah Rashid¹, , Muhammad S. Afana², Honar Cherif², Mohamed A. Yassin².

¹Department of Internal Medicine, Hamad General Hospital, , Hamad Medical Corporation, Doha, Qatar

²Department of Medical Oncology, Hematology Section, National Center for Cancer Care and Research, Hamad Medical Corporation, Doha, Qatar

***Corresponding Author : Dr.Nusiba Elamin, MBBS.**

Department of Internal Medicine, Hamad General Hospital, Hamad Medical Corporation ,Doha,Qatar

Address: P.O.Box 3050. Doha, Qatar

Email : Nusibahafiz@gmail.com

Mobile : 0097433517696

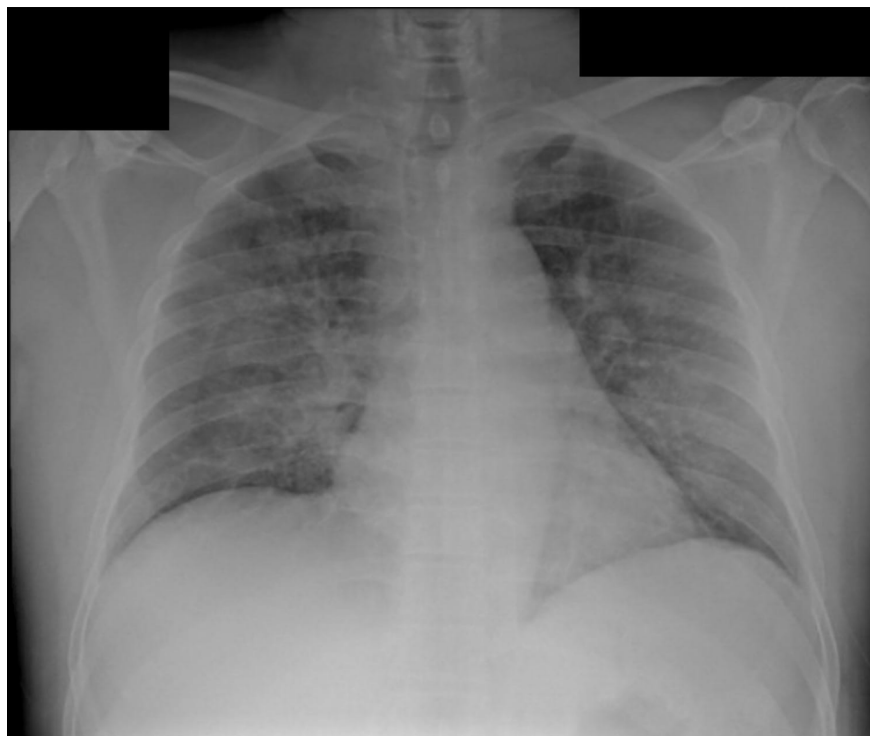
Keywords : Acute leukemia, ATRA syndrome , steroids.

Abstract:

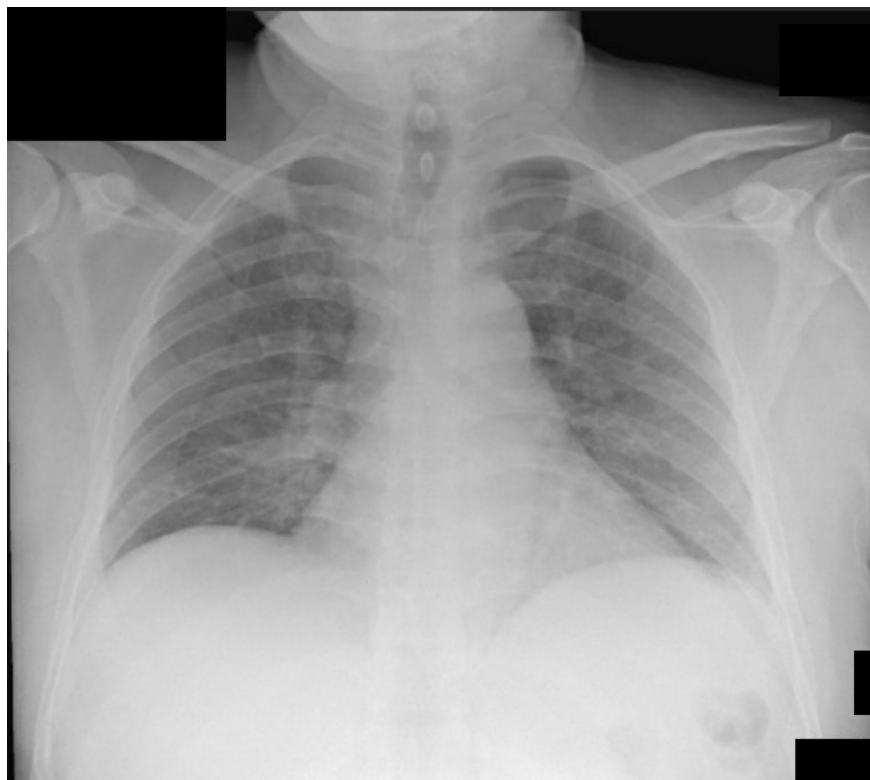
A 48-year-old male diagnosed with Acute promyelocytic leukemia (APL) started on all-trans retinoic acid and arsenic trioxide, developed typical symptoms of differentiation syndrome, and improved dramatically on steroids. Hence, any APL patient started on chemotherapy, needs to be monitored closely for developing differentiation syndrome and to start steroid upon suspicion.

Case presentation:

A 48-year-old male diagnosed with APL started on all trans-retinoic acid (ATRA) and arsenic trioxide(ATO) as per protocol (1), on day 2 he started to have fever, dyspnea, hemoptysis. Chest X-ray (CXR) showed bilateral infiltration (Figure A) and patient was started on dexamethasone, based on suspicion of differentiation syndrome. Patient improved significantly within 24 hrs, and follow-up CXR showed resolution of infiltrates (Figure B). Diagnosis of differentiation syndrome requires 3 or more of clinical features: fever $> 38^{\circ}\text{C}$, weight gain $> 5\text{ kg}$, hypotension, dyspnea, radiographic opacities, pleural or pericardial effusion & Acute renal failure (2). Treatment is dexamethasone 10 mg twice daily initially, and then to adjust the steroid dose based on patient clinical status. Differentiation syndrome is a fatal complication therefore there should be high index of suspicion in APL patients who deteriorates after starting chemotherapy and to start treatment empirically.



(A)



(B)

Conflict of interest:

The authors declare that there was conflict no of interest regarding the publication of this case report.

Availability of data and material :

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

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Author Contributions :

NE was involved in the literature review, initial manuscript writing, FR contributed in data collection, study conception, and MA, HC were involved in patient clinical care. drafting of the manuscript. MY was involved in the literature search, study conception, and drafting and revision of the manuscript.

All authors critically reviewed the article, gave final approval of the version to be published and agreed to be accountable for all aspects of the work.

Consent:

Written informed consent was obtained from the patient to publish this report in accordance with the journal's patient consent policy

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