

**JOURNAL READING
INFEKSI CACING
Ascariasis**



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CASE REPORT: RESPIRATORY FAILURE ASSOCIATED WITH ASCARIASIS IN
A PATIENT WITH IMMUNODEFICIENCY

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Introduction

- In Europe, ascariasis is a rare condition affecting mostly rural citizens (1.2%) and people who are in regular contact with pigs for professional reasons. In Poland, the prevalence of *A. lumbricoides* in humans does not exceed 1% and concerns mainly children from rural areas
- Risk groups for parasitic diseases (e.g., *A. lumbricoides* infection) include patients with immunodeficiency
- In this study present an unusual ascariasis and respiratory failure in a patient with acute myeloblastic leukemia (AML)

Case on presentation

- 66-y.o male was admitted to the Department of Haematology
- History: coughing, a recurrent low-grade fever, night sweats, malaise, and weakness
- Physical examination: bilateral lymphadenopathy: cervical, axillary, numerous inguinal nodes, single crackles at the base of both lungs, no hepatomegaly, and mild splenomegaly.
- Laboratory studies: increased inflammatory parameters, anemia and thrombocytopenia, blasts in the blood smear, and negative bacteriological results concerning the presence of aerobic and anaerobic bacteria
- Microscopic of stool: negative for helminthic ova
- Chest X ray: no indication of infiltrates in the lungs or pneumothorax
- Cytology analysis of BM: in December 2012, the patient was diagnosed with acute myeloblastic leukemia.

Dec 2012

7th day of hospitalization

- Patient was moved to the Intensive Care Unit (ICU) due to acute respiratory and circulatory failure
- Vital sign: HR is 130/min, RR is 150/110mmHg, and oxygen saturation is 92-94% on an oxygen mask with a reservoir, at a flow rate of 15L/min
- Physical examination: individual crackles at the base of the lungs, including single crackles towards the angles of the blades and increased vesicular murmur over the whole lung.
- Chest X-rays showed bilateral multiple scattered airless changes, most likely associated with inflammations.

- General condition of patient got improved and move out from ICU then The patient was qualified for intensive chemotherapy

Jan 2013

March 2013

- a mature form of *Ascaris* spp. appeared in the patient's mouth
- Stereo macroscopic examination: male roundworm, 15cm long and 2.5mm diameter
- Tx: Pirantel
- Patient denied eating unwashed fruits and vegetables, but two weeks prior to the onset of respiratory failure (December 2012) he had removed the feces of pigs at a farm.

Discussion

- This report highlights the importance of considering an *Ascaris* infection in patients with low immunity presenting no eosinophilia but pulmonary failure in the central countries of Europe
- Symptomatic pulmonary ascariasis is characterized by a dry cough, low fever, dyspnea, bronchial asthma, and wheezing (Loffler syndrome), occurs 4 to 16 days after ingesting embryonated round worm eggs
- chest X-rays shows fleeting infiltrates that may develop peripheral confluence and intra-alveolar hemorrhage, and exudate may also be present (associated with larva emigration).

Conclusion

- This case of respiratory failure in a patient with AML, probably induced by human *Ascaris* infestation, is rather rarely discussed
- physicians should pay more attention to the possibility of this disease and reduce the risk of misdiagnosis in this regard