

## A Challenging Case of Pneumonia and Vasculitis

Hazim Abdul-Rahman Alhiti <sup>1\*</sup> and Manaf Abdulrahman Guma <sup>2</sup>

<sup>1</sup>General surgeon Specialist (M.D) Fellow of Iraqi Council of Medical Specialization (General surgery).

<sup>2</sup>Clinical Biochemistry and Biophysics from University of Leicester -UK

\*Corresponding Author: Hazim Abdul-Rahman Alhiti, General surgeon Specialist (M.D) Fellow of Iraqi Council of Medical Specialization (General surgery).

Received date: February 08, 2022; Accepted date: March 31, 2022; Published date: April 11, 2022

Citation: Rahman Alhiti HA and Manaf A. Guma, (2022) A Challenging Case of Pneumonia and Vasculitis. *J. Archives of Medical Case Reports and Case Study*, 5(3); DOI:10.31579/2692-9392/112

Copyright: © 2022 Hazim Abdul-Rahman Alhiti, This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

### Abstract

An elderly (76 years old) immunocompromised Iraqi male had carcinoma of colon stage 3c without metastasis operated for seven years before, plus chemotherapy for one year. In winter 2022, this man sorrowed from a sore throat, voice change, and a rise in temperature (37.4 C). Later, dry cough developed in subsequent hours and deteriorated quickly to yellow-colored sputum, plus an increment in his temperature (37.8 C). After that, the patient had non-specific, non-itchy, follicular erythematous papules. The rash varies in size and shape, distributed in the abdomen, lower back, and legs. Two physicians proved pneumonia by clinical means, plus two successive chest x-rays, but the patient refused the laboratory investigations for Covid. He took two doses of the Chinese vaccine (Sinopharm) six months before recent symptoms. After strict treatment, the cough became less frequent, white-colored sputum, fever dropped gradually, at the end of the week. On the tenth day from the beginning of the man's symptoms, the skin rash faded slowly due to prednisolone usage.

**Key words:** challenging; case; report; pneumonia; vasculitis

### INTRODUCTION

As a fact, infection signifies invading agents penetrating body barriers and causing tissue damage. Further, infectious agents incorporate viruses, bacteria, parasites, or fungi. Furthermore, organisms invade the tissues rapidly, particularly in immune-compromised persons. Moreover, the advancement of microscopes allowed scientists to discover and organize these germs in different species and subgroups. Henceforth, healthcare workers fight infections in different patterns [1].

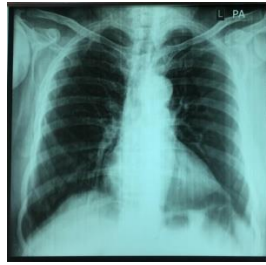
Pneumonia signifies lung infection. Moreover, pneumonia involves the lung alveoli and loads them with pus. Therefore, the patient's breathing will be more distressing, and blood oxygen levels will drop below the average. Consequently, as time advanced, the patient's condition deteriorated quickly. Likewise, numerous contagious germs such as fungi, bacteria, parasites, and viruses yield pneumonia. Accordingly, the well-known causes of viral pneumonia are influenza respiratory syncytial virus, and recently SARS-CoV-2 [2], while the known agent for bacterial pneumonia stands Streptococcus pneumonia. Vasculitis incriminates blood vessel inflammation. Later, the evolved drop in the affected vessel wall decreases blood outpour rules to tissue ischemia. Accordingly, the histopathological markers are perivascular invasion, degeneration, and vascular damage.

Besides, the viruses that provoke vasculitis, like the Hepatitis C virus. Similarly, the bacteria that induce vasculitis include streptococcus. The fungal infection that causes vasculitis is *Mycoplasma pneumonia* [3].

This paper demonstrated an elderly immunocompromised Iraqi man who deteriorated rapidly from acute upper respiratory tract infection to pneumonia, plus maculopapular rash. Hence, the importance of this case is the patient's cure, although he declined to take the laboratory tests of Covid and CT-scan of lung.

### Case Report

An elderly (76 years old) immunocompromised Iraqi male had carcinoma of colon stage 3c, operated for seven years, then chemotherapy for one year. Later, this man refused screening endoscopy and tumor markers. Hence, he eats mainly vegetables and fruits and does not suffer from a colonic problem. In winter 2022, this man sorrowed from a sore throat, voice change, and a low-grade rise in temperature (37.4 C). Subsequently, he suffered a stuffy nose plus throbbing frontal headache after a sudden weather change. Similarly, he had similar attacks three-four times per year. Later, dry cough developed in subsequent hours and deteriorated quickly to yellow-colored sputum plus a gradual increment in his temperature to 37.8 C.



**Figure 1:** Chest x-ray of this man on the third day of the beginning of symptoms

The reader can notice there are minimal lung manifestations of early pneumonia. Consequently, these manifestations enclosed inadequately defined small centri-lobular nodules, bilateral non-symmetric ground-glass reticulo-nodular opacities, bronchial wall thickening, plus airspace

consolidation. The laboratory tests of the same man on the third day of the beginning of symptoms were normal for cardiac enzymes, and lipid profile were normal. The ECG was normal at time of examination.



**Figure 3:** shows the x-ray of the same man on day five of follow-up.

The reader can notice new radiological manifestations incorporating an increment of pulmonary infiltrates, plus an increment of the thickening of bronchial walls, enlargement of the centrilobular nodules, plus an diffuse increment of the lung opacity.



**Figures 4, and Figure 5:** The dermatological picture of the right leg, and right ankle for the same man on the third day of the beginning of symptoms.

There were non-specific, non-itchy, follicular erythematous papules. They varied in sizes and shapes, fading slowly on prednisolone in a gradual tapering schedule. Moreover, this rash distribution was in the abdomen, lower back, and legs.



**Figure 6:** shows the dermatological picture of the abdomen of the same man on the third day of the beginning of symptoms.

There was a non-itchy, non-specific pinky, maculopapular erythematous rash. They varied in sizes and shapes, fading slowly on prednisolone in a gradual tapering schedule.

This man, accompanied by his family, visited two internal medicine specialists in two separated outpatient clinics pursuing management of cough. Accordingly, those physicians proved the presence of pneumonia by clinical means plus two successive chest x-rays, but the patient refused the laboratory investigations for Covid. Moreover, he took two doses of the Chinese vaccine (Sinopharm) in the standard Iraqi guidelines six months before the beginning of the last symptom. Further, he does not have marked side effects from Sinopharm vaccination. Hence, the patient thought the cause of his cough was cold-related. Really, this man sorrowed from cold weather exposure in the daytime before the onset of his manifestations.



**Figure 7, Figure 8, Figure 9 and Figure 10:** The polymorphic post-inflammatory hyperpigmentation.

Accordingly, on the tenth day from the beginning of the man's symptoms, the skin rash faded gradually and slowly, although this man did not suffer from skin itching or pain. Hence, this rash responds mainly to prednisolone usage.

## Discussion

This report illustrated an elderly immunocompromised Iraqi man who worsened quickly from acute upper respiratory tract infection to pneumonia and maculopapular skin rash. Moreover, the low immunity in this elderly patient (76 years old) is the principal predisposition of any simple sickness. Furthermore, he rapid deterioration is an expected sequel. Consequently, winter harbors numerous critical situations for all elderly patients.

The cause of the lower immunity in this Iraqi male is the carcinoma of colon stage 3c, operated for seven years, then chemotherapy for one year. Furthermore, this elderly patient is susceptible to any communicable infectious attackers at any moment. The strange thing is the patient's refusal of cancer creening by endoscopy plus tumor markers. Indeed, he depends on vegetables plus fruits. Thus, he did not mourn from recurrent colonic trouble.

In winter 2022, this man sorrowed from a sore throat, voice change, and a low-grade rise in temperature (37.4 C). Subsequently, he suffered a stuffy nose plus throbbing frontal headache after a sudden weather change. Similarly, he had similar attacks three-four times per year. Accordingly, these are features of sinusitis, in which this man had previous episodes before. Moreover, he visited many otolaryngologists before, they gave him the traditional prescriptions, with good response.

This man took two doses of the Chinese vaccine (Sinopharm) in the standard Iraqi guidelines six months before the beginning of the last symptom, but he might develop new viral modulation of Covid infection. Consequently, this

The two physicians ordered these drugs: a steroid (hydrocortisone injection), prednisolone tablets (tapering schedule), Augmentin (amoxicillin and clavulanate) 1000 mg \*3, Theophylline syrup \*3, salbutamol syrup \*3, Chlorpheniramine \*3, Paracetamol \*3. Moreover, they encourage chest physiotherapy, good hydration, and fresh fruits. Subsequently, the patient refused to admit to the emergency room or hospital admission, but he followed the physicians' advice.

After strict treatment and family encouragement, this man had gradual, notable, and significant improvement. Moreover, the cough became less frequent, white-colored sputum, fever dropped gradually and returned to normal at the end of the week. Accordingly, the man's appetite, walking, and sleep notably improved.

patient declined to do Covid tests, although the physician urged for it. Later, this patient deteriorated quickly to yellow-colored sputum plus a gradual increment in his temperature to 37.8 C. Consequently, this is due to low immunity.

This patient refused hospital admission, but he followed the physicians' advice. Indeed, he took chest remedies plus active and passive lung physiotherapy. Hence, the essence of chest physiotherapy in pneumonia is vital since old cultures [4].

Moreover, this improvement is evident in this patient on the follow-up chest radiograph, plus the apparent clinical improvement in later days.

Later, the patient develops non-specific, non-itchy, follicular erythematous papules. Furthermore, the rash emerged in the abdomen, lower back, and legs. For clinical means, the differential diagnosis of this rash incorporates mycoplasma-related dermatitis, vasculitis, or drug eruption. Accordingly, the dermatology specialist (28 years-experience in dermatology) suggests vasculitis. Further, he advises steroids in oral and external applications. Consequently, the rash faded slowly on prednisolone in a gradual tapering schedule.

Hence, the two internal medicine specialists and the dermatology specialist did not give anti-mycoplasma drugs, but the rash responds to other treatments, including a steroid tapering schedule, which means it is not a mycoplasma-related rash. Moreover, this patient did not develop any similar rash before, although he took different types of antibiotics in his life, so this rash is not a drug eruption. Further, this rash is non-itchy and responds clearly to the steroid tapering schedule, so this rash went with the diagnosis of the dermatology specialist as vasculitis [5].

## Conclusion

Pneumonia and vasculitis in an elderly, immunocompromised patient is a challenging case, so it needs a team of doctors to diagnose and treat.

## References

1. Alhiti HAR. (2021). The Surgical Healthcare Teams Fights against n COVID-19. J Biol Today's World. 10(5): 001.
2. Abdul-Rahman AH. Is There Any Modern and Efficient Cure of nCOVID-19?. Arch Med. 2021;13(9): 46-47.
3. Shang X. (2021). Epidemiology and Clinical Characteristics of Henoch-Schönlein Purpura Associated with Mycoplasma pneumoniae Infection in 131 Children in Hubei Province, China. Mediterr J Hematol Infect Dis.13(1): e2021037.
4. Sereearuno T.(2020). Effectiveness of a chest physiotherapy care map in hospitalized patients. Heart & Lung.49(5): 616-621.
5. Michelle K. (2020). Immune complex vasculitis: a rash that cannot be missed. BMJ Case Reports.13(2): 1-5.



This work is licensed under Creative Commons Attribution 4.0 License

To Submit Your Article Click Here: [Submit Manuscript](#)

DOI:[10.31579/2692-9392/112](https://doi.org/10.31579/2692-9392/112)

### Ready to submit your research? Choose Auctores and benefit from:

- ❖ fast, convenient online submission
- ❖ rigorous peer review by experienced research in your field
- ❖ rapid publication on acceptance
- ❖ authors retain copyrights
- ❖ unique DOI for all articles
- ❖ immediate, unrestricted online access

At Auctores, research is always in progress.

Learn more [www.auctoresonline.org/journals/archives-of-medical-case-reports-and-case-study](http://www.auctoresonline.org/journals/archives-of-medical-case-reports-and-case-study)