

Non Traumatic Pneumocephalus as a Diagnostic Challenge

Basho M¹, Seferi A², Nunci D³ and Vyshka G^{4*}

¹Service of Radiology, University Hospital Center ‘Mother Teresa’, Tirana, Albania

²Department of Neurosciences, Faculty of Medicine, University of Medicine in Tirana, Albania

³Service of Radiology, University Hospital Center ‘Mother Teresa’, Tirana, Albania

⁴Biomedical and Experimental Department, Faculty of Medicine, University of Medicine in Tirana, Albania

*Corresponding author:

Gentian Vyshka,
Biomedical and Experimental
Department, Faculty of Medicine, University of
Medicine in Tirana, Fakulteti i Mjekësisë, Rruga e
Dibrës 371, Tirana, Albania, Tel: +355692828140;
E-mail: gvyshka@gmail.com
ORCID ID: <https://orcid.org/0000-0001-5286-1265>

Received: 16 Nov 2022

Accepted: 20 Dec 2022

Published: 28 Dec 2022

J Short Name: JCMI

Copyright:

©2022 Vyshka G, This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and build upon your work non-commercially.

Keywords:

Pneumocephalus; Otogenic intracranial air;
Headache; Vertigo

Citation:

Vyshka G, Non Traumatic Pneumocephalus as a Diagnostic Challenge. *J Clin Med Img.* 2022; V6(21): 1-2

1. Clinical Image

Considered a rarity, pneumocephalus is being reported more frequently, probably due to raised awareness and better accessibility to more and more sophisticated imaging procedures.

Pneumocephalus might follow neurosurgical interventions; have a traumatic origin or be a consequence of mastoiditis, but spontaneous cases with unidentifiable cause are probable as well [1].

Patients might present with unspecific complaints such as headache, vertigo and general malaise, and with no trauma in the history, a thorough neurological examination might detect subtle symptomatology, here including cranial nerve involvement, postural instability and other signs.

We present the case of a Caucasian female, aged 41 years, with vertigo and headache which had become more intense during the last week prior to admission. She had twice an episode of vomiting, and the neurological findings were discrete. A routine CT

performed at the emergency department revealed intracranial presence of free air (Figures 1-3).

The patient reported no trauma in her life, but rather an anamnestic ear infection supposedly treated and healed some two years before the actual episode. An ENT examination suggested a chronic otitis that was treated with a short course regimen of antibiotics, with the patients being discharged the next day. A follow up head CT two months later showed complete resolution of the occurrence, with the patient free from complaints or clinically important issues.

A non-traumatic pneumocephalus is an occurrence probably underestimated, although anatomic variants of air-filled sinuses might contribute into the appearance of the condition [2]. Other more dramatic cases, within a neurosurgical setting, have been reported as well; but here pneumocephalus has been more an epiphenomenon rather than a decisive factor vis-à-vis the final outcome of the disease [3].

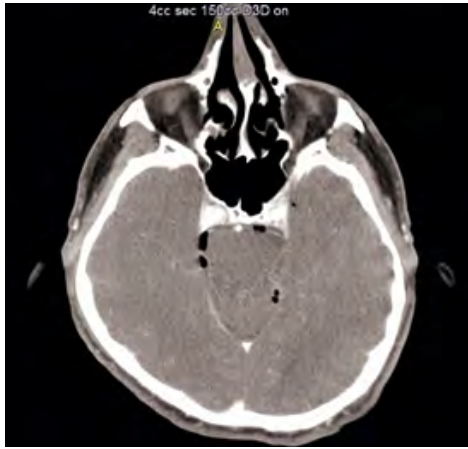


Figure 1: Air bubbles in the truncal spaces, predominantly in the right side.



Figure 2: Air bubbles in the left temporal and sulcal area, with a single air bubble in the median line.

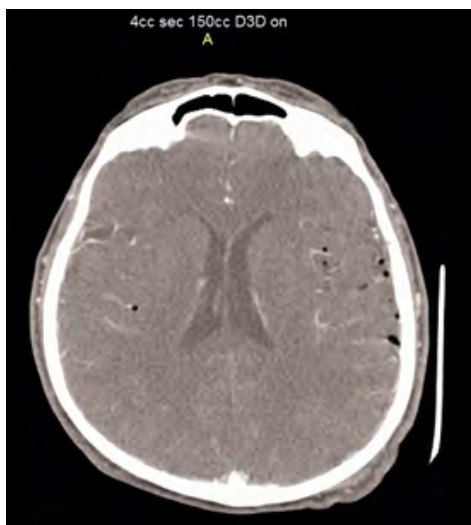


Figure 3: Disparate and multiple air bubbles in the left cortical sulci; another isolated air bubble is seen contralaterally.

References

1. Schirmer CM, Heilman CB, Bhardwaj A. Pneumocephalus: case illustrations and review. *Neurocrit Care.* 2010; 13(1): 152-8.
2. Pishbin E, Azarfardian N, Salarirad M, Ganjeifar B. Spontaneous Nontraumatic Pneumocephalus: A Case Report. *Iran Red Crescent Med J.* 2015; 17(7): e23920.
3. Alharbi A, Khairy S, Alkhani A. Pneumocephalus after subcutaneous emphysema. *Surg Neurol Int.* 2022; 13: 249.