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Findings in chest angiotomographies with PET protocols

Abstract

Objectives: To investígate and analyze the tomographic findings in AngioCT with PET protocol.

Material and method: Tomography reports of patients undergoing AngioCT for suspected PE during the period from January 2020 to December 2022 performed at the high complexity hospital were analyzed. RESULTS: The analysis showed a significant increase in findings in 2021, associated with the frequency of pulmonary embolism (PE) in patients with SARS-CoV-2 infection. The predominant age range was 60 to 79 years. There was a slight predominance of male patients compared to female patients. Among the most common are pleural or pericardial effusion, atelectasis, and the ground glass or mosaic pattern.

Conclusions: The results of this study demonstrate that CT angiography with a PET protocol is a valuable diagnostic tool in patients with suspected PE. Incidental detection of these injuries raises questions about appropriate management, follow-up, and the need for medical interventions. This phenomenon has led to a growing need to develop clear guidelines and criteria for the evaluation and management of incidentalomas found on chest PET scans. In this context, it is crucial to investigate and better understand the nature and clinical implications of these findings to improve medical decision making.

Keywords: CT angiography, pet, incidental findings, pulmonary embolism

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Introduction

Computed tomography (CT) scans of the chest are a vital tool in the diagnosis of lung and cardiovascular diseases, including pulmonary thromboembolism (PTE). These studies, performed with specific protocols to detect PE, have led to an increase in the identification of incidental lesions, known as incidentalomas.[1]

In the context of chest CT scans with PET protocol, incidentalomas represent a significant clinical challenge. These findings can vary in nature and severity, from benign lesions to malignant neoplasms. This research proposes to know these findings.

Goals

- Investigate and analyze tomographic findings in AngioCT with PET protocol.
- Compare the results with various multicenter studies from other institutions.

Material and method

Retrospective, analytical and descriptive study in which tomography reports of patients undergoing AngioCT for suspected PE during the period from January 2020 to December 2022 performed at the High Complexity Hospital wereanalyzed.

Demographic data such as age, gender, the presence or absence of PE, its chronicity and extent were taken into account. The association with COVID infection. Emphasizing incidental findings and their frequency.[2]

Results

276 AngioCT with PET protocol were analyzed. The analysis showed a significant increase in 2021, associated with the frequency of pulmonary embolism (PE) in patients with SARS-CoV-2 infection. Figure 1.

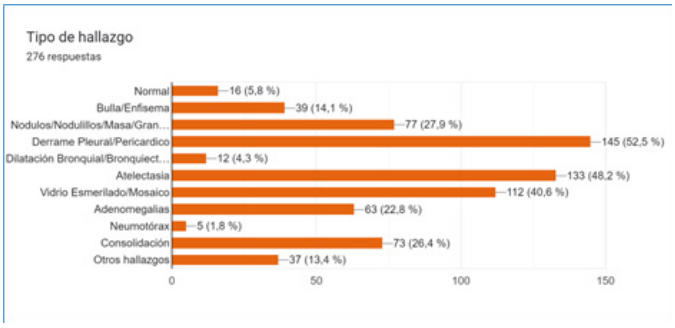

Figure 1 Analysis of PET protocol.

Regarding age, it was shown that the predominant age range was 60 to 79 years. There was a slight predominance of male patients compared to female patients.[3]

It is relevant to highlight that in 98% of the studies, pathological findings of various kinds were found, which supports the indication of CT Angio in these patients. Among the most common are pleural or pericardial effusion, atelectasis, and the ground glass or mosaic pattern.

The results obtained in this study were compared with 3 multicenter studies of previous research, reaffirming the relevance of carefully evaluating incidental findings during the interpretation of CT angiography for the diagnosis of PE. In such studies, it is worth highlighting the important difference that in the hospitals evaluated, all have an emergency service, so the patient rate is higher; on the other hand, the diagnosis of PE drops abruptly compared to our research Figure 2.

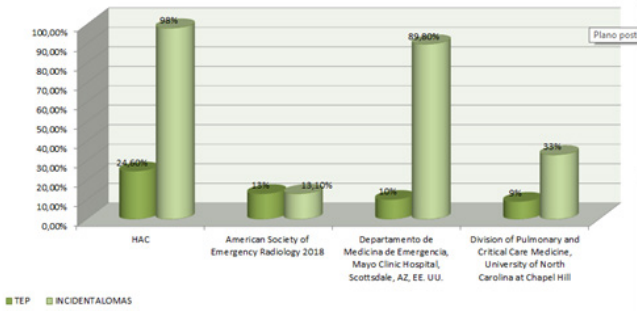

Figure 2 Comparison of three multicenter studies of CT angiography for the diagnosis of PE.

Results will be compared below:

Computed tomography for suspected pulmonary embolism results in a large number of non-significant incidental findings and follow-up investigations (1708)[4]

Prevalence and Significance of Nonthromboembolic Findings on Chest Computed Tomography Angiography Performed to Rule Out Pulmonary Embolism (1025)[5]

The Prevalence of Clinically Relevant Incidental Findings on Chest Computed Tomographic Angiograms Ordered to Diagnose Pulmonary Embolism (598)[6]

Conclusion

- In summary, the results of this study demonstrate that CT angiography with a PET protocol is a valuable diagnostic tool in patients with suspected PE.
- Incidental detection of these injuries raises questions about appropriate management, follow-up, and the need for medical interventions.
- This phenomenon has led to a growing need to develop clear guidelines and criteria for the evaluation and management of incidentalomas found on chest CT scans with PET protocol.
- In this context, it is crucial to investigate and better understand the nature and clinical implications of these incidentalomas to improve medical decision making.

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Conflicts of intertest

The autor declare that there are no conflicts of interest.

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References

1. Kline JA, Courtney DM, Beam DM, et al. Incidence and predictors of repeated computed tomographic pulmonary angiography in emergency department patients. *Ann Emerg Med*. 2009;54(1):41–48.
2. Perelas A, Dimou A, Saenz A, et al. Incidental findings on computed tomography angiography in patients evaluated for pulmonary embolism. *Ann Am Thorac Soc*. 2015;12(5):689–695.
3. Mountain D. Multislice computed tomographic pulmonary angiography for diagnosing pulmonary embolism in the emergency department: has the 'one-stop shop' arrived? *Emerg Med Australas*. 2006;18(5-6):444–450.
4. Anjum O, Bleeker H, Ohle R. Computed tomography for suspected pulmonary embolism results in a large number of non-significant incidental findings and follow-up investigations. *Emerg Radiol*. 2019;26(1):29–35.
5. Richman PB, Courtney DM, Friese J, et al. Prevalence and significance of nonthromboembolic findings on chest computed tomography angiography performed to rule out pulmonary embolism: a multicenter study of 1,025 emergency department patients. *Acad Emerg Med*. 2004;11(6):642–647.
6. Hall WB, Truitt SG, Scheunemann LP, et al. The prevalence of clinically relevant incidental findings on chest computed tomographic angiograms ordered to diagnose pulmonary embolism. *Arch Intern Med*. 2009;169(21):1961–1965.