



CTE Session 8

Technologists and Inflammation and Infection Committee

Tuesday, October 22, 16:45 - 18:15

Session Title

Imaging Infection in Specific Populations

Chairpersons

Agata Pietrzak (Poznan, Poland)

Domenico Albano (Brescia, Italy)

Programme

- 16:45 - 17:05 **Paul van Snick** (Groningen, Netherlands): Intensive Care hybrid imaging – how to handle the case of emergency?
- 17:05 - 17:25 **Simone Seifert** (Würzburg, Germany): Heart in flames – radionuclide diagnosis of cardiac infectious diseases
- 17:25 - 17:45 **Markus Köhner** (Erlangen, Germany): The ¹⁸F-FDG PET-CT in cardiac inflammation & infection - the original case studies
- 17:45 – 18:05 **Maria Silvia De Feo** (Rome, Italy): Diabetes-related inflammatory and infectious diseases: Nuclear Medicine applications
- 18:05 – 18:15 Discussion

Educational Objectives

1. Present mandatory elements of the Intensive Care Unit (ICU) patients' evaluation
2. Explain the clinical indications for performing Nuclear Medicine Imaging in ICU patients
3. Overview of the benefits and limitations of hybrid imaging in ICU patients' diagnostic and therapeutic management
4. Outline the principles of collaboration with the caregivers of the patients in critical health condition
5. Describe the indications to perform cardiac radionuclide imaging
6. Characterize Nuclear Medicine methods used for cardiac infectious diseases evaluation
7. Present the best practice in cardiac inflammation and infection radioisotope diagnostic management principles
8. Overview of the principles of supporting cardiac patients' recovery
9. Outline the utilities of the ¹⁸F-FDG PET-CT study in cardiac inflammation and infection diagnosis
10. Characterize the applications of the ¹⁸F-FDG PET-CT study by presenting a series of case studies
11. Name the critical elements of diabetic patients' inflammation and infection diagnostic management pathway
12. Explain clinical indications to perform radionuclide imaging in diabetic patients, focusing on inflammatory diseases of various anatomic regions
13. Present the best practice in the diabetic patients' radionuclide diagnostic management



Summary

Nuclear Medicine (NM) expanded significantly over the years, developing several solutions to most common clinical indications. Due to evolution of the field, the accessibility to NM imaging techniques and radionuclide agents became wider, and therefore – the numerous clinical applications of the methods have emerged. Aside from the most commonly recognized oncological utilities, radionuclide imaging have found its applications in other diagnoses, such as inflammatory diseases or infections' care. Inflammation and infection, despite their origin, share a significant characteristic: those demand rapid, precise and often complex patients' care. This includes a variety of clinical indication: from the diabetic patients' management, through cardiac infections diagnosis and therapy, up to emergency healthcare at Intensive Care Units (ICUs). NM offers the possibility to examine several acute diseases', involving extensive interdisciplinary medical teams and complex diagnostic pathways, which are going to be discussed during the session.

Key Words

Cardiac disease; diabetes; inflammation; infection; intensive care; hybrid imaging; nuclear medicine; positron emission tomography