CTE Session 3

Technologists + Inflammation & Infection Committee
Sunday, October 5, 16:45 – 18:15

Session Title

Best Practice in Paediatric Inflammation & Infection Radionuclide Imaging - Heart, Bone and Joint, Kidney and Urinary Tract

Chairpersons

Agata Pietrzak (Poznań, Poland)
Olivier Gheysens (Brussels, Belgium)

Programme

16:45 – 17:10 **Domenico Albano** (Brescia, Italy): The [18F]FDG PET-CT in inflammation of unknown origin among children
17:10 – 17:35 **Begoña Rodriguez-Alfonso** (Madrid, Spain): Musculoskeletal diseases – state-of-the-art in hybrid imaging
17:35 – 18:00 **Renata Madru** (Lund, Sweden): When the kidneys fail: the urinary tract inflammation & infection molecular diagnosis
18:00 – 18:15 Discussion

Educational Objectives

1. Provide the definition of inflammation of unknown origin and the most common etiologies in the paediatric population.
2. Overview of the diagnostic algorithm and management of paediatric patients with inflammatory syndromes.
3. Present the role of radionuclide imaging in inflammation of unknown origin: applications and pitfalls.
4. Mention the particular aspects of working with paediatric patients undergoing radionuclide imaging for inflammation and infection.
5. Provide a schematic overview of the most frequent inflammatory and infectious musculoskeletal diseases in children.
6. Describe the procedural recommendations for whole-body musculoskeletal imaging methods in paediatric patients.
7. Discuss the application and limitations of paediatric hybrid imaging in musculoskeletal from diagnosis to patient management.
8. List the urinary tract diseases diagnosed in paediatric patients.
9. Overview of the indications for radionuclide imaging in the urinary tract diagnosis in children.
10. Discuss the paediatric radionuclide hybrid imaging management in kidney failure diagnosis.

Summary

The paediatric patients are a very particular population and comprises a heterogenous group of patients who require a specific and individual approach adapted for every single patient and study. Both the diagnosis and therapy of children demand a much more complex framework compared to the adult population. Paediatric patients are vulnerable and necessitate a specific approach both from the psychological, as well as the procedural perspective. Additionally, the healthcare professionals cooperate not only with the child but also with their caretakers throughout the medical procedures, which requires specific considerations and a more individualized approach for both diagnosis and treatment planning.

Inflammation and infection in general evoke a sense of health crisis and urgency. The complexity and often unpredictable outcomes of the diseases highlight the need for a strong interdisciplinary communication and cooperation. identifying the source of inflammation and infection and choosing the right diagnostic and therapeutic strategies can be challenging, particularly in children. Therefore, the multidisciplinary medical team caring for paediatric patients with inflammation and infection must be well-prepared. Above all, however, the team must work closely together, fostering a deep mutual understanding which will be highlighted and discussed during this session.

Key Words

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