2020 First steps in Neonatal Brain Ultrasound: an amazing, adventurous journey!

Learning objectives of the Course

The Course is aimed at beginners in neonatal brain US scanning and it is organized offering both frontal lectures and practical sessions. The aim of the Course is to give an introduction to the exciting world of ultrasound imaging. During the day attendees will learn the fundamentals of US physics, the probe skills to optimize an US image and the different functionalities of the ultrasound system. The Course will give each participants the opportunity to get “hands-on” sessions with the machines and to use it to scan and fix in an image the basic structures of the “normal” neonatal brain. The main goal of the Course is to build an open “dialogue” between teachers and participants, in order to learn practically the guidelines for brain ultrasonography. The theoretical lessons will be connected with the didactic programme of the following Course “2020 Neonatal Ultrasound Course. Why, how and when an ultrasound image?” which will be held on 27-30 October, 2020 in Florence, Italy, where many “pathologic” images of the neonatal ultrasonography will be treated extensively.

The Director of the Course  
Dr. Antonio La Torre

Lecturers

Dr. Antonio La Torre  
Neonatology Department, AOU Careggi Hospital, Florence, Italy

Prof. S. Monica Epelman  
University of Central Florida and Florida State University  
Department of Medical Imaging - Radiology  
Nemours Children’s Hospital  
Orlando, USA

Prof. Michael Riccabona  
Department of Radiology  
Division of Paediatric Radiology  
University Hospital LKH, Graz, Austria
Monday, 26 October

**PROGRAMME**

8.30-9.00 Introduction: the anatomy of the brain  
*Dr. Antonio La Torre*

9.00-9.40 US Physics: what is it, how does it work?  
A talk together  
*Dr. Antonio La Torre*

9.40-10.15 Transducers and their properties  
A talk together  
*Dr. Antonio La Torre*

10.15-11.00 Neuroultrasonography: in pursuit of an optimized examination. Coronal and sagittal planes. The main points of view: anterior and posterior fontanel, mastoid fontanel  
*Prof. S. Monica Epelman*

11.00-11.15 COFFEE BREAK

11.15-12.15 *First practical session:*
the technical properties of US machine, the basic rules of a good exam

12.15-13.00 Ischaemic encephalopathy and the normal hyperechodensity-cystic-lesions (normal and abnormal)  
*Prof. S. Monica Epelman*

13.00-14.15 LUNCH

14.15-14.45 Neonatal Cerebral hemorrhage  
*Prof. S. Monica Epelman*

14.45-15.30 Doppler Sonography in neonatal neurosonography: physics, basics and typical applications/findings  
*Prof. Michael Riccabona*

15.30-16.30 *Second practical session:*
An US exam by alone…print your images!

16.30-17.30 *Tests for the participants in small groups:*
What is the diagnosis?

17.30-18.15 The cerebral ventricles: the normal and the pathology (hydrocephalus)  
*Prof. Michael Riccabona*

18.15-18.30 Questions and Answers  
*CME Test*

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*The lecturers of the practical sessions are: S.M. Epelman, A. La Torre, M. Riccabona*