Silvia Valeggia

Black-bone MRI evaluation of cranial vault and temporal bone in craniosynostoses

Short Bio	I am a medical doctor and I graduated at the Faculty of Medicine, University of Padova, Italy. I am attending the third year of Radiology residency in Padova, focusing on Neuroradiology and Pediatric Neuroradiology.
Home Institution	Istituto di Radiologia, Padova University Hospital, Padova, Italy
Host Institution	Department of Radiology, Erasmus MC, Rotterdam, The Netherlands
Project description	Craniosynostoses are congenital often syndromic skull deformities due to premature closure of sutures, that might involve the temporal bone causing hearing loss. Early surgical treatment is often recommended to prevent further deformities and to favor the re-growth of the bone. Preoperative management requires CT, for a better definition of bone structures. This implies radiation exposure of very young patients. MRI Black Bone (BB) sequences provide a high contrast between bone and surrounding soft tissues. Their usefulness in children has already been shown in skull fractures, but a systematic evaluation of craniosynostoses has never been performed. The aim of the project is to assess whether an MRI protocol including BB sequences might be a noninvasive alternative to CT in investigating cranial vault and/or temporal bone synostoses and malformations, both preoperatively and in the follow-up.
Personal statement	I would like to specialize in rare diseases in Neuroradiology. Due to the wide casuistry available in the Erasmus MC, I will have the chance to examine an enormous number of radiological exams of these patients (considering the rarity of the disease) and to relate with experts. The EJP fellowship will be a unique opportunity to increase my knowledge and skills, to learn new working methods and to understand the application of non-radiating imaging techniques in craniosynostoses. I hope that this fellowship will also help to create a direct link between the Institutions, with the purpose to increase the availability of data on rare diseases and to share scientific material, to help a better clinical management of these complex patients