BRACCO FELLOWSHIPS - EDUCATION IN RESEARCH

Project 13:

Optimization of magnetic resonance vascular imaging sequences in upper extremity transplant recipients.

NAME OF INSTITUTION: Leeds Teaching Hospital NHS Trust, Vascular Radiology, Leeds/UNITED KINGDOM

RESEARCH GROUP AND ITS MISSION:
The research will be undertaken by vascular radiology at Leeds Teaching Hospital which is the only UK hospital approved and commissioned to undertake hand and upper extremity transplant surgery.

Advanced musculoskeletal and vascular imaging is an essential component of patient evaluation before and after hand transplantation. Pre-operative assessment of recipient suitability for transplant and surgical planning to postoperative complications need multimodality imaging. The imaging protocol for hand transplant, which can be any level of upper extremity transplantation may use a combination of the following modalities for surgical planning: plain film radiography, catheter angiography, vascular Doppler ultrasonography, computed tomography (CT), and magnetic resonance imaging (MRI). The postoperative imaging includes radiography, ultrasound including doppler, catheter angiography, CT, and MRI.

Currently there are no national or international standardized guidelines or protocols for imaging and being the only UK centre to undertake these complex procedures, the radiology unit at Leeds Teaching Hospital has a very important role to play in both supporting the transplant service and guiding the wider national and international imaging units in providing high quality, advanced multimodality imaging.

OBJECTIVES:

- To assess the ability of non-contrast MRA, standard MRA, time resolved MRA and High-resolution VIBE to comprehensively evaluate arterial and venous pre-operative imaging of hand and upper extremity transplant recipients
- Optimize sequence protocol
APPLICANT’S DUTIES:

- Undertake a literature search and write the project to obtain ethical exemption. Please note the sequence are already in clinical use
- Participate in analysis of the coded data available
- The vessels will be divided into segments and a numeric score will be assigned to enable two radiologists to read the studies and score. Applicant to prepare score sheet

APPLICANT’S BENEFITS:

- Participation on scientific outcomes of the project i.e. presentations to congresses or publications of papers
- Understand MR sequences used in hand and upper extremity evaluation
- Learn the hand transplant imaging pathway

Project Leader: Dr. S. Puppala
Members: Vascular Radiology at Leeds Teaching Hospital

NOTE: Please note the applicant will have no direct contact with patient or patient details. They will be able to be onsite as clinical/research observer only. The obtaining of this observer status is a time-consuming process and early start is recommended. The Leeds Teaching Hospital charges 250£ fee separate to the Visa fee etc. Accommodation is sometimes available in hospital and is not included as standard and incurs a charge i.e. it’s not free.