



Study on thrombectomy in stroke management

Context

The aim of this study was to bring recommendations on indications for thrombectomy in stroke management. This study required to extract from the PACS perfusion MRI exams for around 300 patients, performed before and after thrombectomy at the Toulouse Hospital since 2014. A workstation from Olea medical enables to measure volumes of necrosis and brain hyperfusion, allowing the calculation of ischemic shade at the stroke acute phase.

Radiomics Enabler®: a 3-stage process



1. Selecting the relevant sequences: from a 'csv' file containing the list of patient IDs, Radiomics Enabler® queries the PACS to have the list of all MRI exams done for these patients (DICOM C-FIND). The user selects the exams and launches the extraction process ;

2. Extracting, Anonymizing: the extraction (DICOM C-MOVE) of images, and the anonymization of DICOM headers are performed in the background, typically at night time. A look-up table with the original and anonymized data is saved and can be queried ;

3. Verification and routing to the post-processing workstation: the user checks that the operation is complete. In the present case, anonymized exams are exported on media in the DICOM-Dir format then importer in the Olea workstation.

Testimonial

"I started using the export feature from our PACS to perform the extractions. I spent 6 hours using 2 PACS workstations to extract exams from the first 20 patients! Radiomics Enabler® happened to be the only practical solution. Moreover, the application being full web, I was able to work from home with a VPN access to the hospital, without preventing my colleagues from using the PACS workstations."

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