### RIH - BRAIN VENOGRAM
GE LIGHTSPEED VCT PROTOCOL

#### Application: cerebral venous thrombosis

| Position/Landmark | Supine head first or feet first  
<table>
<thead>
<tr>
<th></th>
<th>Zero at outer canthus of eye.</th>
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<tbody>
<tr>
<td>Topogram Direction</td>
<td>Craniocaudal</td>
</tr>
<tr>
<td>Respiratory Phase</td>
<td>Any</td>
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</tbody>
</table>
| **KV / mA / Rotation time (sec)** | nc brain                         
| Pitch / Speed (mm/rotation) | 120kv / smart mA (50-350) / 0.5 sec |
| Noise Index / ASiR / Dose Reduction | 0.531:1 , 10.62mm     |
|                    | 6.5 / 20 / 20%                           |
| **Detector width x Rows = Beam Collimation** | 0.625mm x 32 = 20mm               |
| **Average Tube Output** | nc brain                         
|                        | ctdi – 51.1 mGy                   |
|                        | dlp – 872 mGy.cm                  |
| **First Helical Set** | body                             |
| Slice Thickness/ Spacing | recon part                         
| Algorithm              | reconstitute part                  |
| Recon Destination      | thickness/ spacing                |
|                       | algorithm                          |
|                       | destination                         |
| 1                   | thin brain .6mm x .6mm             |
| **Second Helical Set** | venogram brain                     |
| Slice Thickness/ Spacing | recon part                         
| Algorithm              | reconstitute part                  |
| Recon Destination      | thickness/ spacing                |
|                       | algorithm                          |
|                       | destination                         |
| 1                   | venogram brain .6mm x .6mm        |
| **Scan Start / End Locations** | nc brain                         
|                        | 1cm inferior to skull base         |
|                        | skull vertex                       |
|                        | 25cm                               |
|                        | decrease appropriately             |
| **DFOV**              | venogram brain                     |
|                        | 1cm inferior to skull base         |
|                        | skull vertex                       |
|                        | 18cm                               |
| **IV Contrast Volume / Type / Rate** | 80mL Iohexol (Omnipaque 350) / 4mL per second |
| **Scan Delay**        | 30 seconds                         |
| **2D/3D Technique Used** | DMPR: 5mm x 5mm axial and coronal nc brain reformats in the glabellomeatal plane (auto-batch off), average mode, auto transferred to PACS |
|                        | DMPR: Axial, sagittal, and coronal cta reformats, 10.00mm x 5.00mm, mip mode (auto-batch on) |
| **Comments:** A non-contrast brain is done first. The venogram brain recon is a thin soft algorithm for reformats. |
| **Images required in PACS** | Scouts, 5mm x 5mm axial nc brain, 5mm x 5mm coronal nc brain, 6mm x .6mm axial brain venogram, 10mm x 5mm axial venogram mip, 10mm x 5mm sagittal venogram mip, 10mm x 5mm coronal venogram mip, Dose Report |

updated Jan 23, 2017