Invasive Angiography Following FFRCT – A Real World NHS Experience

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Abstract

Invasive Angiography Following FFRCT

Objective: To present a real-world experience of using Fractional Flow Reserve Computed Tomography (FFRCT) for coronary revascularisation, and to compare this with invasive angiography at RUH Bath.

Method: A retrospective analysis of all FFRCTs performed at RUH Bath between April 2018 and January 2019 was conducted. All studies were reviewed to assess the next step in the patient pathway, comparing FFRCT findings with invasive angiography management. Results: 108 studies were reviewed. Of the 38 vessels with ‘high probability of flow-limiting disease’ that were not invasively assessed, all were branch vessels (2 diagonals and 1 obtuse marginal).

Conclusions: This study represents a real-world NHS experience of activity undertaken in the catheter lab when functional information of coronary flow is known in advance of an invasive procedure. In some cases (13/16 [81%] of patients with a high probability of flow limiting disease) a direct decision on re-vascularisation was taken by the operator without further invasive pressure wire assessment, which may have reduced procedure duration. Further experience with FFRCT may increase operator confidence and thus increase the frequency of proceeding directly to re-vascularisation where indicated, thus reducing both procedure and fluoroscopic screening times. A further assessment of the role of FFRCT employed for stent planning pre-procedure is intended.

Conflict of Interest

None

Abstract 53 Table 1: Patient demographics, investigations and revascularisation

<table>
<thead>
<tr>
<th>FFRCT</th>
<th>Invasive Coronary angiogram</th>
</tr>
</thead>
<tbody>
<tr>
<td>iFR/FFR -ve</td>
<td>iFR/FFR +ve</td>
</tr>
<tr>
<td>Intermediate</td>
<td>7</td>
</tr>
<tr>
<td>High</td>
<td>0</td>
</tr>
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</table>

Of the 3 vessels with ‘high probability of flow-limiting disease’ that were not invasively assessed, all were branch vessels (2 diagonals and 1 obtuse marginal).

Conclusions This study represents a real world NHS experience of activity undertaken in the catheter lab when functional information of coronary flow is known in advance of an invasive procedure. In some cases (13/16 [81%] of patients with a high probability of flow limiting disease) a direct decision on re-vascularisation was taken by the operator without further invasive pressure wire assessment, which may have reduced procedure duration. Further experience with FFRCT may increase operator confidence and thus increase the frequency of proceeding directly to re-vascularisation where indicated, thus reducing both procedure and fluoroscopic screening times. A further assessment of the role of FFRCT employed for stent planning pre-procedure is intended.

Conflict of Interest None