

Developing a Pathway and Dedicated Service for Patients with Refractory Angina

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Introduction

Refractory angina (RFA) is an underappreciated, growing and expensive problem with an estimated annual incidence of between 30,000 and 50,000 in Europe alone.¹ Improvements in medical therapy and revascularization strategies mean that more people with coronary artery disease are surviving longer but living with chronic debilitating symptoms.^{2,3} The management of angina remains challenging using conventional treatment strategies. A significant number of patients remain symptomatic despite PCI, CABG and anti-anginal drugs. In the UK, the management of patients with RFA is underprovided. Local provision of care is currently not designed to meet patient requirements and would be better-placed using existing models of chronic pain management. Moreover, the national provision of specialist care is limited, resulting in major geographical inequality in access to dedicated RFA services. Barts Heart Centre offers tertiary cardiac services including primary and elective PCI, cardiac surgery and complex intervention. As a result of the level of specialist cardiac care provided, there is an ever-growing population of patients with multiple previous interventions and ongoing symptoms where the evidence suggests a dedicated RFA service would be of greatest benefit. The purpose of this project is to set up a referral pathway and run a refractory angina service to better serve this patient group.

Objectives

- To create a referral pathway for patients with refractory angina
- To introduce a multidisciplinary team approach to the management of RFA
- To integrate chronic pain and conventional therapies for chronic coronary syndromes in the management of patients with RFA
- To improve access to novel therapies for managing RFA through engagement with research studies

Methods and Patient Pathway

The first step in setting up the service was to understand the scale of the problem which involved an audit of the complex coronary intervention clinic to identify the number of patients seen over a period of 6 months between October 2021 and April 2022 who would meet the criteria for a diagnosis of refractory angina. Once identified, a referral pathway was then created and an MDT set up once a month to discuss and arrange appropriate management including referral to chronic pain teams for consideration for neuromodulation, recruitment to research studies in refractory angina, up-titration of medical therapy and referral for further complex revascularization. (Figure 1)

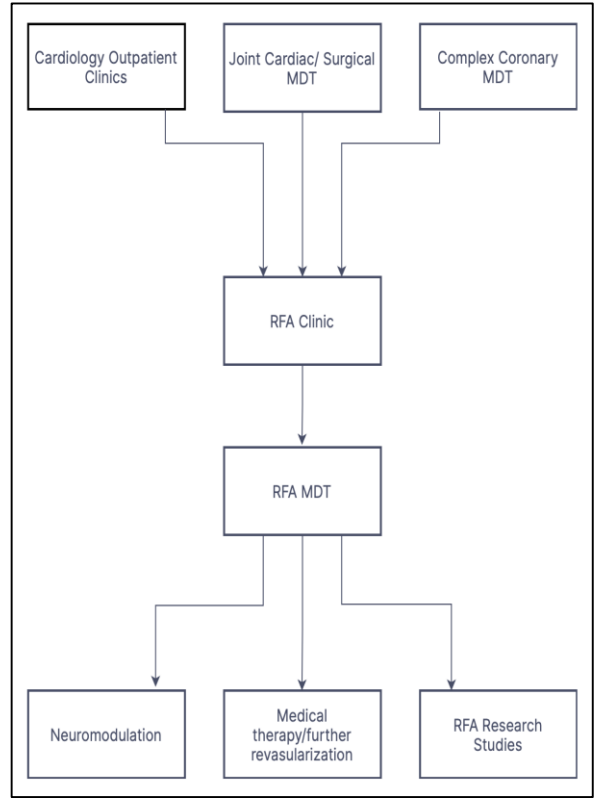


Figure 1: Refractory Angina patient pathway

Results

From the initial audit of clinic patients, of the 74 patients seen in the complex coronary intervention clinic, 29 (39%) met the criteria for diagnosis of refractory angina. (Figure 2) The referral pathway for patients was created in collaboration with anaesthetic colleagues and a once monthly multidisciplinary team meeting was set up, members of which included:

- 2 to 3 Interventional Cardiology Consultants
- 2 Pain Specialist Consultants
- 1 to 2 Clinical Research Fellows

Potential treatment options that patients could access via the dedicated RFA service was expanded to include referral to the chronic pain team for spinal cord stimulator therapy and access to novel therapies including growth factor and progenitor cell therapy as a part of research studies, in addition to specialist interventional cardiology review for optimization of medical therapy and consideration for complex coronary intervention. Since the service was set up in March 2022, a total of 22 patients have been reviewed and discussed at the refractory angina MDT. (Figure 3) Of these 22 patients: (Figure 4)

- 4 (18%) were referred to the pain team and went on to have neuromodulation therapy with spinal cord stimulators.
- 5 (22%) patients have spinal cord stimulators in situ and are awaiting device re-programming.
- 11 (50%) patients were deemed eligible and approached for research studies in RFA, 6 of these patients were successfully recruited.
- 2 (10%) patients had medical therapy up-titrated.

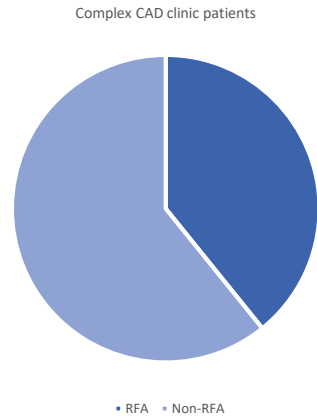


Figure 2

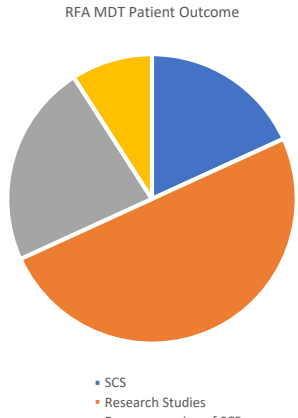


Figure 3

Conclusions and Areas for Further Development

This project shows the successful implementation of a pathway for the management of patients with refractory angina at our centre with direct access to the pain team and treatment options for chronic pain with a multidisciplinary team approach. In addition, it integrates research and provides patients easier access to novel therapies for the management of RFA.

- Ongoing areas of further development:
- Access to clinical psychology for pain management
 - Including the prescription of specialist medications for the treatment of RFA (e.g. trimetazidine) as a part of the RFA service
 - Increasing awareness and expanding the service to local district general hospitals

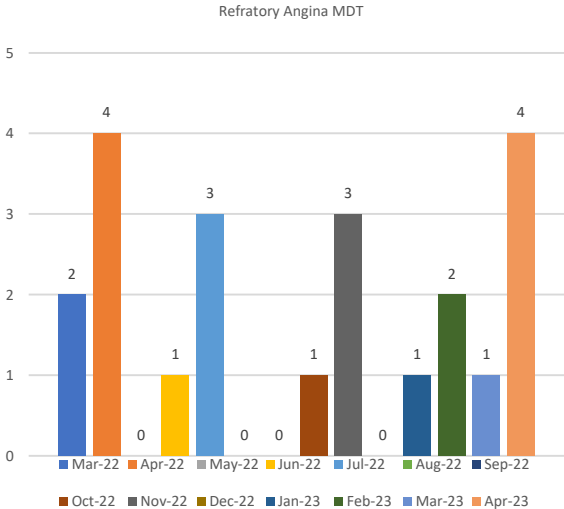


Figure 4: Patients referred via the RFA pathway from April 2022 to April 2023

References

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