

# Post-Covid-19 Syndrome: A Dedicated Cardiology Clinic

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## INTRODUCTION

Approximately 10% of people experience prolonged illness after Covid-19.<sup>1</sup> When signs and symptoms continue for >12 weeks and are not explained by an alternative diagnosis, this is referred to as 'Post-Covid Syndrome'.<sup>1,2</sup> These symptoms are wide ranging and multisystem. Specific cardiac symptoms include palpitations, chest pain, breathlessness (not explained by respiratory investigations) and dizziness/pre-syncope.

## PROJECT AIMS

- To provide a dedicated clinic for patients experiencing cardiac symptoms and/or abnormal cardiac investigations post Covid-19 infection.
- To collaborate with other Cardiologists looking after this cohort of patients

## SCOPING WORK

- Initial liaison with our local respiratory physicians identified a cohort of patients requiring a specialist cardiology opinion.
- Collaboration with other interested cardiologists around London resulted in a weekly teleconference meeting to share experience and ideas.
- A Referral Pathway was developed to guide local GPs as to which patients may benefit from a Cardiology Specialist opinion (Figure 1). A patient information leaflet developed 'Post Covid Syndrome and the Heart' (Figure 2).
- Cardiology presence at weekly multi-disciplinary COVID team meeting to understand local strategy and resources.

## INITIAL EXPERIENCE

To date, 22 patients have been reviewed in the Guy's and St Thomas' dedicated clinic. Mean age 45 (range 25-70), and 46% female.

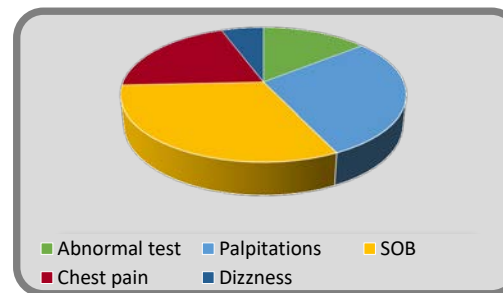


Table 1: Symptoms of patients seen in Post-Covid Cardiology clinic

## OUTCOMES

Of the 18 patients who have completed their investigations 5 (28%) had evidence of myocarditis, 9 (50%) had no cardiac pathology and were reassured, 3 (17%) had coronary artery disease managed medically and 1 had an incidental diagnosis of hypertrophic cardiomyopathy.

## CONCLUSION

- Half of patients had no significant cardiac pathology and simply needed reassurance and lifestyle advice. At follow-up these patients slowly improved.
- Collaboration with colleagues involved in this cohort of patients was essential to pool knowledge and seek a collaborative opinion.
- Anecdotally, those with palpitations and inappropriate sinus tachycardia responded very well to b-blockers. Evidence is urgently needed to guide optimal management in this cohort.

## REFERENCES

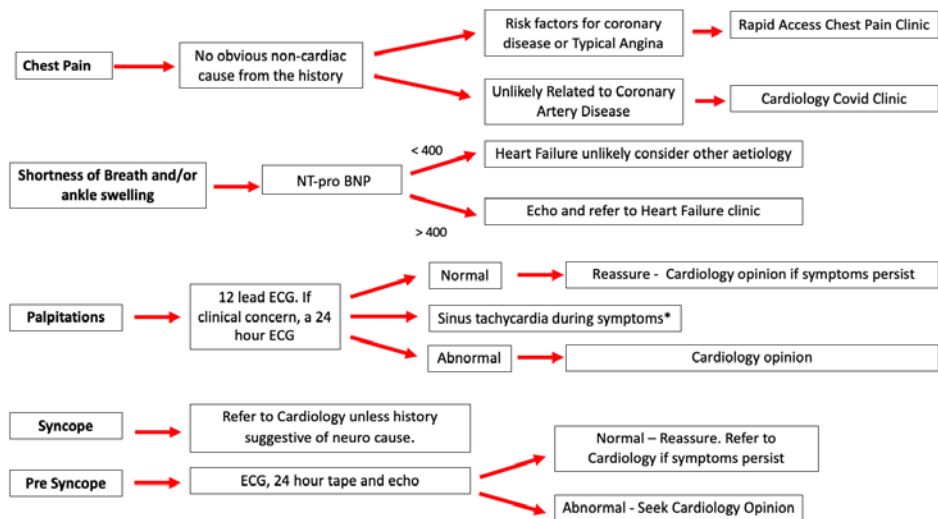
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**Palpitations**

Awareness of your heart beating can occur in patients with Post COVID syndrome. It may feel like is going too fast, missing a beat, beating irregularly or beating strongly.

Abnormal heart rhythms are more common during COVID-19 infection and for a short period of time afterwards. Common abnormal rhythms include atrial fibrillation and atrial flutter. In some cases extra heart beats can occur called ectopics. More information can be found on these on the British Heart Foundation Website at:

<https://www.bhf.org.uk/informationsupport/publications/keyword/palpitationsandangina-eng/keywords/ahc1>

If any of these are suspected you will have an ECG, which records the electrical activity in the heart. You may also need to have a 24-hour heart rate monitor.

In some cases, heart rate monitoring will show periods of fast heart rate, but with normal heart rhythm. This is called sinus tachycardia.

**Sinus Tachycardia (Fast Heart Rate with Normal Heart Rhythm)**

In order to allow better delivery of blood to tissues, your heart rate will and should increase in response to stress. Such stress might be physical or mental.

**Post COVID Syndrome and the Heart**

**A Guide for Patients**

The control of this is via the nervous system of the body, which allows the brain to communicate with the natural pacemaker of the heart (the sinoatrial node) and tell it to beat faster when needed.

Some patients with Post COVID syndrome have what might appear to be "inappropriate" sinus tachycardia. This is where the degree of heart rate response to mild exertion seems exaggerated. This might be due to COVID 19 infection resulting in de-conditioning. Loss of cardiovascular fitness or lung problems meaning that your heart has to work harder at lower workload.

Sometimes, fatigue, dehydration or mental stress will also result in sinus tachycardia. A "vicious circle" can occur in patients who self-monitor their heart rates, seeing a higher than expected heart rate causes anxiety resulting in mental stress which further drives the tachycardia and exacerbates the problem.

It is important to recognise that sinus tachycardia alone is very rarely due to a heart problem. In most cases any "inappropriate" sinus tachycardia in Post COVID syndrome will resolve over time as you get better without the need for any drug treatment. Inappropriate sinus tachycardia will not result in any damage to your heart function.

If you have inappropriate sinus tachycardia, we firstly will look to reassure you that you do not have heart disease and then encourage you to keep hydrated and eat salt to your diet as both measures can be very helpful in helping to prevent symptoms. We often discourage self-monitoring of heart rate. If you still have unpleasant symptoms despite this, we will discuss the potential to use medications such as beta blockers to help.

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Figure 2: 'Post-Covid Syndrome and the Heart' Patient information leaflet.

Figure 1: Proposed pathway for General Practitioners. \* Reassure/encourage fluid and salt intake. Consider asking patient to stop home monitoring. Seek Cardiology opinion if symptoms persist.