

Development of a novel Complex Valve Assessment Clinic

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With an ageing population, the incidence of heart valve disease is increasing. Assessment of valve disease can be complex due to co-morbidities and haemodynamic factors, often requiring specialist assessment and diagnostics. The increasing number of treatment options available require decisions and interventions to be tailored to the individual patient.

Once symptoms are heralded, heart valve disease is associated with a prognosis worse than most cancers¹ and timely diagnosis and treatment is critical. European Society of Cardiology guidelines suggest valve intervention within 2 months of symptom onset², a target which is frequently not met within the UK, with patients waiting on average 5 months from referral to valve intervention³. Given the poor outcomes in this patient group, rapid access to specialist assessment, diagnostics and then appropriate valvular intervention is key.

OBJECTIVES

We aimed to assess the current pathway at our hospital for valvular intervention and develop a novel complex valvular intervention clinic (CVAC). The CVAC would offer a rapid access 'one-stop' service for the diagnosis and assessment of patients with symptomatic valve disease (Figure 1). The pathway would be re-audited following its development to ensure the aim of reducing time from referral to valvular intervention had been achieved.

MATERIALS & METHODS

Case notes were reviewed from 10 consecutive patients undergoing valvular intervention in 2018 to assess pathway waiting times. The CVAC was then developed; this is a multi-disciplinary clinic comprising a Consultant Cardiac Scientist and Consultant Cardiologist. Following referral to CVAC, the patient underwent a teleconsultation within 2 weeks of referral where a comprehensive history was taken. They attended a face to face appointment the following week for comprehensive assessment including examination, frailty assessment and same day diagnostics as required (Table 1). At the time of the appointment, onward referral for valve intervention or referral back to valve surveillance clinic was arranged. An audit of 47 consecutive patients undergoing valve intervention was performed one year following the creation of CVAC comparing patients referred via the CVAC pathway and the 'traditional' (pre-CVAC) pathway (Figure 2).

REFERENCES

- Otto C. NEJM. 2014.
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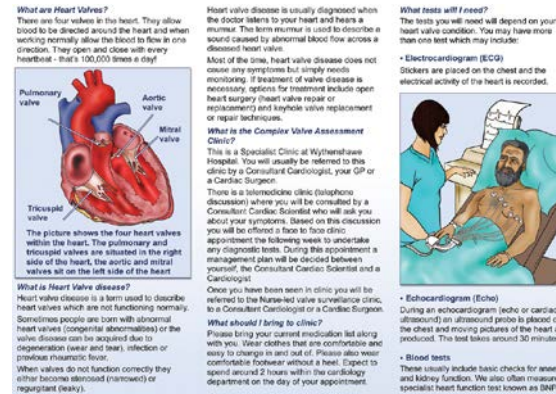
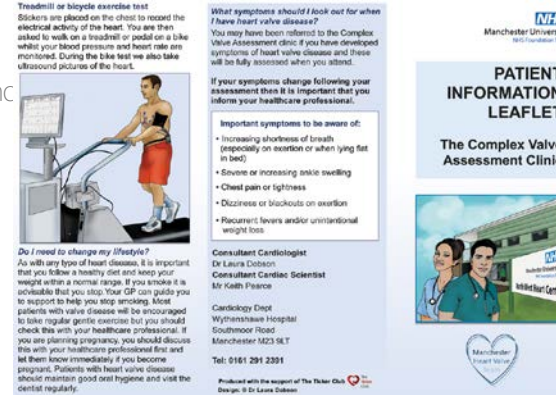


Figure 1. Patient information leaflet

6 minute walk test	Exercise / dobutamine stress echo	Treadmill exercise test
Chest X-Ray	Bloods including BNP	Carotid Doppler
CT Agatston score	Advanced / 3D echo	Pulmonary function tests

Table 1. 'One stop' diagnostic tests available at CVAC clinic

RESULTS

Of the patients audited prior to CVAC, 8 (80%) patients were referred with symptomatic severe aortic stenosis. 8 (80%) were new referrals from the GP, 2 (20%) were patients from valve surveillance clinic. Prior to CVAC the mean (median) time from referral to review in Cardiology out-patient clinic was 70 (70, range 28-112) days. Time from referral to surgery was 245 (210, range 175-392) days and onset of symptoms to surgery 385 (350, range 287-588) weeks. A further audit of 47 consecutive patients undergoing valve intervention was performed one year after the introduction of CVAC comparing those undergoing valve intervention via the CVAC route and the traditional route. This demonstrated a median time from referral to review in CVAC of 13 days. Median time from referral to valvular intervention was 101 days via CVAC and 193 days via the traditional pathway.

CONCLUSION

The creation of a novel rapid-access Complex Valve Assessment Clinic led to an average reduction in time from referral to valvular intervention of 92 days. Although this intervention led to a shorter pathway for patients with high risk valvular lesions at risk of decompensation, further work still needs to be completed to shorten the patient journey to achieve intervention within 60 days as per the ESC guidelines.

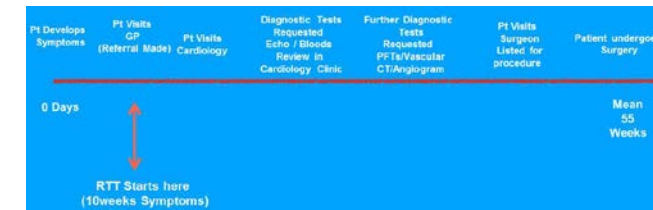


Figure 2. 'Traditional' patient pathway for patient with symptomatic heart valve disease