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EMPHASIZING EXERCISE IN ACHD: WHY AREN'T WE TALKING ABOUT IT?

Sophie Thompson, Caitlin Whitehead, Alex Notley, Isabel Guy, Chethan Kasargod Prabhakar, Paul Clift, Lucy Hudsmith. *University Hospitals Birmingham NHS Foundation Trust, Birmingham, UK*

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Introduction Exercise is a safe and effective therapy for adults with congenital heart disease (ACHD) with positive effects on morbidity, mortality and quality of life.¹ European Society of Cardiology (ESC) guidelines recommend that exercise interventions and promotion of physical activity should occur at every contact between ACHD patients and healthcare professionals.² We sought to investigate how many ACHD patients recall these interventions.

Methods We designed and conducted a data-based prospective survey exploring exercise behaviors of ACHD patients and recall of discussions around physical activity. The questionnaire was distributed to patients in outpatient clinics and inpatient wards at a tertiary ACHD centre in the UK, between October and November 2020.

Results In total 125 patients completed the survey. Demographically, 60% were women, 34% were men and 4% preferred not to answer. The majority of respondents were of White British or European ethnicity (73.6%). With regard to baseline physical activity levels, only 66 (52.8%) respondents met recommended exercise targets, participating in moderate physical activity for at least 150 minutes per week. This reduced further to 40.8% following the COVID-19 pandemic lockdown ($p=0.03$) (figure 1). Common motivations for physical activity were general fitness (53.6%), weight loss (36.0%) and mental health benefits (30.4%). Key reasons for reduced physical activity as a result of the pandemic were fear of COVID-19 (28.0%), loss of motivation (23.2%) and gym/fitness centre closure (15.2%) (figure 2). Almost two thirds (65.6%) of respondents did not recall having a discussion about exercise participation with healthcare professionals. Discussions about individualized exercise prescriptions were recalled by 8 respondents (6.4%). In total, 16% recalled being told to avoid certain exercises by their healthcare team; common responses of exercises to be avoided included high impact/contact sport and heavy weightlifting, with others told not to run, scuba dive or play golf.

Conclusions Almost half of the surveyed population did not meet recommended exercise targets before the pandemic, with even fewer meeting recommendations during the first COVID-19 pandemic lockdown. The majority of patients do not recall ever having discussions about exercise with their healthcare team. Whilst we are unable to determine whether this is due to discussions not occurring or poor patient recall, there are clear deficiencies in the provision and/or retention of health promotional information surrounding exercise. Quality improvement initiatives to improve patient awareness and involvement in physical activity may be considered two-fold. Firstly, attention should be paid to improving patient recall of advice from consultations, which could involve the provision of written aids and individualised exercise prescriptions. Secondly, healthcare professional confidence in providing exercise recommendations to the heterogenous ACHD population is an area for improvement. This may include raising awareness of common motivations for exercise in this group that could be harnessed and formal education on available guidelines. The COVID-19 pandemic has negatively impacted exercise habits

Abstract 16 Figure 1 Weekly physical activity prior to and during the COVID-19 pandemic

Abstract 16 Figure 2 Reasons for decreased physical activity during the COVID-19 pandemic lockdown

in the ACHD population and despite changes in healthcare service delivery, including the shift towards tele-medicine, the benefits of exercise must be emphasized at every opportunity.

Conflict of Interest None

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THE IMPACT OF THE COVID-19 PANDEMIC ON TRANSCATHETER AORTIC VALVE IMPLANTATION (TAVI) SERVICES IN THE UNITED KINGDOM: A TERTIARY CENTRE EXPERIENCE

Joon Tan, Tsu Kuan Teoh, Julia Ivanova, Sachin Jadhav, Richard Varcoe, Kamran Baig, Ashan Gunaratne. *Nottingham University Hospitals NHS Trust, Nottingham, UK*

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Background/Introduction Untreated, symptomatic, severe aortic stenosis carries significant mortality and morbidity. Timely intervention is pivotal to ensure patient safety. The COVID-19 pandemic created unprecedented challenges to the UK's National Health Service (NHS), resulting in the deferral of all

elective work, including TAVI services from March 2020. We sought to evaluate clinical outcomes and time delays in patients undergoing TAVI during the pandemic period compared to an age and risk factor-matched cohort of patients prior to COVID-19. We hypothesized that there were significant time delays, more emergency procedures and related adverse outcomes in patients who underwent TAVI during the pandemic period.

Methods We analysed prospectively collected data (patient characteristics, procedural details, complications and in-hospital outcomes) of 210 consecutive patients who underwent TAVI between March 2019 and February 2021 in a tertiary centre in the UK (The centre serves for a population of 2.5 million and provided in-patient treatment for 5590 COVID-positive patients over a 12-month period). We compared time-lags from an initial referral to outpatient review, CT aortograms, MDT discussions, valve implantations and 30-day mortality between patients who underwent TAVI between March 2019 and February 2020 (Control group=134) and those who underwent TAVI between March 2020 and February 2021 (COVID Group=76).

Results The mean age of the cohort was 81.9 ± 6.4 years compared to 80.9 ± 6.9 in the COVID-19 group. 59% of the control group and 43% of the COVID-19 group were female. Majority were in the moderate risk category (EuroSCORE II= 4.55 ± 5.5). Mean Katz index in the control group was 5.4 ± 0.9 and 5.7 ± 0.5 in the COVID-19 cohort. Patient characteristics are summarised in table 1. Of the total cohort, 4 (5.3%) patients acquired COVID-19 pneumonia during the hospital stay. The comorbidities and risk scores were comparable between the control group and the COVID cohort. (Table 1). There were no significant differences in procedural complications in the control group compared to the COVID-19 group (table 2). The median waiting time from referral to TAVI clinic was significantly shorter in the COVID-19 group (33 (8-66) vs. 51(17-89) days (P=0.04)) and there was no significant difference in time delays for CT aortogram, MDT or

Abstract 17 Figure 1

TAVI procedure between the two groups (Figure 1). The median length of stay (2 (2-4) vs 2.5(2-9) days) and 30-day mortality (1.4% vs 5.3%) was comparable between the two groups.

Conclusion Contrary to our hypothesis, our analysis demonstrated that there were no significant time delays, excess complications or mortality in TAVI procedures during the COVID-19 pandemic period despite the excess burden imposed on our local health services. More importantly, very few TAVI patients acquired COVID-19 sepsis during in-hospital stay. This is likely due to prompt identification of innovative ways of re-configuring an existing local patient pathway, by the TAVI team, to deliver safe and uninterrupted TAVI services during this unprecedented pandemic setting.

Conflict of Interest None

Abstract 17 Table 1 Patient characteristics

	Control (n=134)	Covid-19 (n=76)	P value
Diabetes Mellitus	37 (27.6)	17 (22.4)	0.404
Creatinine (mmol/l)	106.2 ± 75.2	104.9 ± 85.9	0.390
Previous MI	14 (10.4)	11 (14.5)	0.387
Previous Cardiac Surgery	11 (8.2)	13 (17.1)	0.051
Coronary artery disease in > 1 artery*	9 (6.7)	7 (9.2)	0.513
Chronic pulmonary disease	49 (36.6)	28 (36.8)	0.968
Severe liver disease	5 (3.7)	1 (1.3)	0.313
Previous cerebrovascular disease	32 (23.8)	10 (13.2)	0.062
Extracardiac arteriopathy	13 (9.7)	9 (11.8)	0.626
EuroSCORE II (%)	4.51 ± 7.1	4.6 ± 4.4	0.344

Values are mean ± SD or N (%). *Coronary artery disease defined as >50% stenosis.
EuroSCORE = European System for Cardiac Operative Risk Evaluation;

Abstract 17 Table 2 Complications and clinical outcomes

Complications	Control (n=134)	Covid-19 (n=76)	P value
Post procedural stroke	6 (4.5)	2 (2.6)	0.439
Major bleeding*	3 (2.2)	2 (2.6)	0.926
AKI Stage 2 and 3†	1 (0.7)	1 (1.3)	0.725
Major vascular complications‡	4 (3)	5 (6.6)	0.267
Percutaneous device closure failure	4 (3)	2 (2.6)	0.811
New pacemaker implantation	25 (18.7)	15 (19.7)	0.942
Endocarditis	1 (0.7)	0 (0)	0.433
Cardiac tamponade	0 (0)	1 (1.3)	0.2
Valve malpositioning	1 (0.7)	0 (0)	0.433

Values are N (%). *Bleeding and † Acute kidney injury as defined by the Acute Kidney Injury Network criteria. ‡ Major vascular complications as defined by the Valve Academic Research Consortium 2

18 PREVALENCE OF AORTIC ROOT DILATATION IN PATIENTS WITH FABRY DISEASE: A SINGLE CENTRE EXPERIENCE

Christina Peter, Tian Zhao, Patrick Deegan, Rosemary Rusk. *Cambridge University Hospitals, Cambridge, UK*

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Introduction Fabry disease is an X linked lysosomal storage disorder resulting from deficiency of the enzyme alpha-galactosidase A. Multi-systemic effects are seen due to deposition and accumulation of glycosphingolipids. Although left ventricular hypertrophy is often the most commonly cited cardiac finding, cardiac manifestations can be widely varied, and vascular structural changes with increased thickening of the intima media and progressive vascular dilatation have been observed. Aortic root dilatation in affected males has in the past been reported in up to 30 – 56% using echocardiography, with varying criteria used to define dilatation.

Purpose To establish the prevalence of aortic root and ascending aortic dilatation evaluated by echocardiography in our cohort of Fabry patients.

Method We identified genotype positive Fabry patients from our single centre Fabry database who underwent