Abstract 128 Table 2 Blood pressure variables during 24 hours following mechanical thrombectomy between patients with and without intracerebral hemorrhage

Variable	No ICH n=104	ICH N=60	P	Adjusted OR* 95% CI	P
Admission SBP	147(24)	145(24)	0.554	...	...
Admission DBP	79(14)	81(13)	0.457	...	...
24h SBP mean	129(17)	131(14)	0.412	...	...
24h DBP mean	70(10)	73(10)	0.166	...	...
24h MAP mean	90(12)	92(12)	0.485	...	...
24h SBP SD	11.9[10-15]	12.5[10-17]	0.144	...	...
24h DBP SD	9.8(3.1)	10.9(3.4)	0.038	1.02(0.89-1.16)	0.832
24 SBP CV	9.8(3.0)	10.6(3.9)	0.223	...	...
24 DBP CV	13.9(4.3)	15.1(5.3)	0.122	...	...
24h SBP max	154(22)	160(19)	0.071	...	...
24h SBP min	104(14)	107(13)	0.153	...	...
24h DBP max	89.5[83-100]	98.5[93-107]	0.001	1.04(1.01-1.07)	0.025
24h DBP min	53(10)	55(11)	0.257	...	...
24h SBP range	47[39-59.5]	48[40-63]	0.330	...	...
24h DBP range	39(14)	43(15)	0.055	...	...

* Adjusted for the use of Tirofiban Hydrochloride during MT, the history of hypertension, symptom onset-to-groin puncture time (minutes) and pretreatment with IV tPA.
Variables are mean±SD, or median and IQR. ICH, intracerebral hemorrhage; BP, blood pressure; CI, confidence interval; CV, coefficient of variance; max, maximum; min, minimum; OR, odds ratio; SD, standard deviation; MAP, mean arterial pressure; DBP, diastolic blood pressure; and SBP, systolic blood pressure.

Abstract 128 Table 3 Association of blood pressure with intracerebral hemorrhage

Outcome	OR	P	Adjusted OR* 95% CI	P
Any ICH (maximal SBP dichotomized >155 mmHg)	2.53(1.31-4.89)	0.006	2.50(1.27-4.93)	0.008
Any ICH (maximal SBP as continuous variable per 1 mmHg increase)	1.01(1.00-1.03)	0.073	1.01(1.00-1.03)	0.122
Any ICH (maximal DBP dichotomized >92.5 mmHg)	5.24(2.50-11.0)	<0.001	4.78(2.22-10.2)	<0.001
Any ICH (maximal DBP as continuous variable per 1 mmHg increase)	1.03(1.01-1.06)	0.009	1.03(1.01-1.05)	0.027

*Adjusted for age, baseline NIHSS, occur to recanalization time, recanalization status (successful defined as mTICI 2b–3 versus unsuccessful defined as mTICI 0–2a)
ICH indicates intracerebral hemorrhage; DBP, diastolic blood pressure; SBP, systolic blood pressure; and OR, odds ratio.

Abstract 128 Table 4 Association of dichotomized maximal blood pressure with intracerebral hemorrhage in the subgroup of successful recanalization

Outcome	OR	P	Adjusted OR* 95% CI	P
Any ICH (maximal SBP dichotomized >158.5 mmHg)	3.07(1.38-6.84)	0.006	3.08(1.36-6.97)	0.007
Any ICH (maximal DBP dichotomized >91.5 mmHg)	5.18(2.12-12.7)	<0.001	5.19(2.08-12.9)	<0.001

* Adjusted for age, baseline NIHSS, occur to recanalization time, recanalization status (successful defined as mTICI 2b–3 versus unsuccessful defined as mTICI 0–2a)
ICH indicates intracerebral hemorrhage; DBP, diastolic blood pressure; SBP, systolic blood pressure; and OR, odds ratio.

Abstract 128 Table 5 Association of maximal blood pressure as a continuous variable with intracerebral hemorrhage in the two subgroups of successful recanalization and incomplete recanalization

Outcome with Incomplete Recanalization (mTIMI 0-2a)					
Variables, mean (SD)	Any ICH N=22(49%)	No ICH N=23(51%)	P	Adjusted OR* 95% CI	P
maximal SBP as continuous	160(17)	162(26)	0.788	0.99(0.97-1.02)	0.695
maximal DBP as continuous	100(11)	96(16)	0.326	1.02(0.97-1.06)	0.426
Outcome with Successful Recanalization (mTIMI 2b-3)					
Variables, mean (SD)	Any ICH N=38(32%)	No ICH N=81(68%)	P	Adjusted OR* 95% CI	P
maximal SBP as continuous	160(20)	152(21)	0.037	1.02(1.01-1.04)	0.039
maximal DBP as continuous	98(14)	91(14)	0.024	1.03(1.02-1.06)	0.037

* Adjusted for age, baseline NIHSS, occur to recanalization time, recanalization status (successful defined as mTICI 2b–3 versus unsuccessful defined as mTICI 0–2a)
Variables are mean±SD, N (%); ICH indicates intracerebral hemorrhage; DBP, diastolic blood pressure; SBP, systolic blood pressure; SD, standard deviation; and OR, odds ratio.

maximum SBP were 155 mm Hg, and maximum DBP 92.5 mmHg, respectively.

Conclusion A higher BP within 24 h after MT in acute occlusions of the anterior cerebral circulation is associated with a greater risk of ICH. More studies are needed to further determine optimal BP goals in the acute phase after MT.

Conflict of Interest none

129 AORTIC DILATATION IS MORE COMMON THAN YOU THINK

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10.1136/heartjnl-2020-BCS.129

Introduction Aortic dilatation is a common finding in patients with aortic valve disease or genetic connective tissue disease, such as Marfan's. It is known that dilatation of the aorta is a precursor for life threatening aortic aneurysm leading to rupture or dissection (1,2,3). The ESC recommends that in patients with Marfan's syndrome, surgical intervention is offered once the aortic diameter is >50mm or >45mm if other risk factors are present, and in patients with bicuspid aortic valve, once the aortic diameter reaches >55mm or >50mm if other risk factors present (1). There is currently a lack of literature on the incidence of aortic dilatation in the general or even hospital population though there has been data suggesting an incidence of aortic aneurysm to be 5.9 cases per 100,000 (2). In patients with hypertension, the prevalence of aortic dilatation was reported to be as high as 12% (3). The aim of our project was investigate the incidence of aortic dilatation by echocardiography in our hospital population which may lay the foundation for population study.

Methods A randomised retrospective review was carried out using the electronic echocardiogram database at our hospital. Echocardiograms performed on every Thursday between 1st October 2016 and 1st April 2018 were included in this study. Aortic dilatation was defined if the aortic root was >3.8 cm, or ascending aorta>3.6 cm. Along with echocardiographic analyses, basic patient demographic variables including age and gender were recorded.

Results A total of 2150 echocardiograms were analysed over the 18 months. The median age of our cohort was 69 years (22 - 94). 66% of our patients were males and 34% females. 146 patients were found to have aortic dilatation. Therefore, the incidence of aortic dilatation was 6.8% in our study population.

Conclusion The incidence of aortic dilatation in our hospital population of 6.8% was significantly higher than we expected. It is a staggering 1000 fold increase when compared to current literature surrounding the incidence of aortic aneurysm which is the possible end point of aortic dilatation(1,2). Based on the incidence established in this study, our hospital alone would have at least 400 patients with a dilated aorta in a year. Due to the potential detrimental prognosis of aortic dilatation, further investigations are certainly warranted to identify risk factors related to the development and progression of aortic dilatation as well as the pattern of progression.

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Conflict of Interest Nil

130 USING SMARTHPHONE APPLICATIONS TO TARGET POOR CARDIAC MEDICATION ADHERANCE

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10.1136/heartjnl-2020-BCS.130

Statement of the Problem The ORBITA trial [1] has shown that severe coronary stenosis patients undergoing percutaneous coronary intervention did not show a significant difference in symptom relief. Thus, focus is shifting to medication for long-term symptomatic relief, primarily aspirin, statins, clopidogrel, anti-anginal and anti-hypertensives [2]. Current research [3, 4] shows that approximately 50% of patients with cardiovascular disease have poor adherence to their medications, costing the NHS £300 million annually. Our aim was therefore to develop an innovative method to increase patient's adherence to their cardiovascular medication.

Methodology Research was carried out into the main barriers to taking medications, and these were identified as forgetfulness; misinformation on the drug's side effects and lack of motivation to take medication due to perspectives on efficacy of medication. An initial survey on patients showed that 96% of respondents used a smartphone regularly, enforcing our decision to create an app. Microsoft PowerPoint was used to create the prototype with sections on information on drugs they were taking, an interactive quiz, a calendar selection and a rewards section. Initial patient opinion was then gauged at a focus group of patients participating in the ORBITA trial (n=10) and based on constructive feedback given, improvements were made. The app was then tested on the cardiac ward at Hammersmith hospital where patients (n=14) filled in questionnaires on various adherence parameters before and after using the app. Data was then analysed using Mann-Whitney-U tests and compared.

The app prototype: The app contains 4 main sections which aim to increase drug adherence. The drug information section gives concise overviews of the major classes of cardiovascular medications with information on coping with side effects. The quiz section tests uses drug-specific questions that highlight the efficacy and the low frequency of the side effects of each medication. The calendar section outlines the user's drug regimen with push notifications for reminders to take medications. Tick boxes are used to monitor adherence and can be cashed in for rewards.

Results The app enabled certain barriers to adherence to be overcome with patients showing a significant decrease in concern over perceived side effects ($p<0.001$), and a significant improvement in understanding of prescribed medication ($p<0.01$). 83% of patients said the app would help them to remember to take their medication

Conclusion Significance: As importance is shifting away from invasive procedures to pharmacological therapy in these patients, more needs to be done to ensure better drug adherence to increase both patient's medical well-being, and cost-effectiveness in reducing medical waste. Smartphone applications, such as the prototype developed, offer a new innovative way for patients to engage and be proactive with their healthcare. They enable patients to have a greater understanding of their conditions and the medications they are taking, ultimately increase patient adherence.

Conflict of Interest none

131 THE HYPERTENSIVE RESPONSE TO EXERCISE AND CARDIAC ABNORMALITIES IN MALE VETERAN ENDURANCE ATHLETES

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10.1136/heartjnl-2020-BCS.131

While the benefits of moderate regular exercise to overall health are irrefutable, there is a growing body of evidence to suggest that years of chronic endurance exercise may bear adverse cardiovascular consequences. A hypertensive response to exercise (HRE) has been correlated with adverse cardiovascular outcomes. We tested the hypothesis that the presence of a HRE in athletes who expose themselves to thousands of hours of endurance training may contribute to adverse structural and electrical cardiac remodelling, including pathological coronary calcification, myocardial fibrosis and ventricular arrhythmias.

Between 2013-2015, 152 asymptomatic endurance athletes (70% male) and 92 controls of similar age (median 52; range 40-82 years) were evaluated with ECG, echocardiogram, cardiopulmonary exercise testing (CPET), 24 hour Holter