COVID-19 IS ASSOCIATED WITH AN INCREASE IN CENTRAL AND AORTIC AUGMENTATION INDEX IN WOMEN

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Introduction Coronavirus disease 2019 (COVID-19) may lead to impaired cardiovascular function in middle-age and older adults. The aim of the present study was to evaluate the effect of COVID-19 on arterial stiffness in previously healthy women and men.

Methods Eighty-four healthy individuals with history of COVID-19 (mean age: 60±7 years, 55% women) and 40 individuals without history of COVID-19 (mean age: 63±7 years, 63% women) were recruited to the study between May 2021 and January 2023. Participants with a history of confirmed COVID-19 were recruited at least 28 days post recovery and within 18 months of infection. All participants underwent arterial stiffness assessment using non-invasive technology based on pulse wave velocity and pulse wave analysis using the Sphygmocor Xcel (AtCor Medical, Sydney, Australia). The outcome measures of arterial function and stiffness included pulse wave velocity (PWV), central augmentation index (C-AIx), and aortic augmentation index (A-AIx).

Results There were no significant differences between COVID and non-COVID groups in body weight (78±14 vs. 74±14 kg, p=0.33), height (168±9.1 vs. 166±9.0 cm, p=0.27) and body mass index (27.0±4.2 vs. 26.5±3.8, p=0.59), respectively. Arterial blood pressure was not significantly different between COVID and non-COVID groups (systolic: 134±17 vs. 131±17 mmHg, p=0.39; diastolic: 83±10 vs. 81±10 mmHg, p=0.16). There was no significant difference between the COVID-19 and non-COVID-19 group in measures of arterial stiffness including PWV (7.46±1.74 vs. 7.32±1.79 ms-1, p=0.69), C-AIx (29.2±9.12 vs. 29.2±8.44 %, p=0.98) and A-AIx (131±8.31 vs. 131±8.12 %, p=0.94). No significant difference was found in age between men and women in the COVID group (60.4±7.5 vs. 58.8±7.4 years, p=0.35), and the non-COVID group (64.5±6.0 vs. 61.7±7.8 years, p=0.23), respectively. Sex analysis within the COVID group revealed that men demonstrate significantly lower values of C-AIx and A-AIx than women (24.6±8.59 vs. 33.0±7.77 %, p<0.01; and 126±6.77 vs. 134±7.77 %, p<0.01). In the non-COVID group, there were no significant differences between women and men in augmentation index values (C-AIx, 30.3±8.16 vs. 28.5±8.70 %, p=0.50; and A-AIx, 131±7.96 vs. 130±8.29 %, p=0.49).

Conclusion The findings from the present study suggest that within 18 months of infection, COVID-19 may lead to a significant increase in augmentation index, a marker of arterial stiffness, in middle-age and older women compared to men.

Conflict of Interest N/A

THE ROLE OF THE VASCULAR RISK MODIFICATION CLINIC IN ACHIEVING GUIDELINE-DIRECTED LIPID LOWERING THERAPY: A SINGLE-CENTRE OBSERVATIONAL STUDY

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Introduction Lipid lowering therapy (LLT) is an important strategy to reduce the risk of future atherosclerotic cardiovascular disease (ASCVD) following acute coronary syndrome (ACS) events. The utilisation of a dedicated vascular risk modification clinic (VRC) may represent an effective approach to delivering European Society of Cardiology (ESC) guideline-directed recommendations on the management of dyslipidaemia in this group of very high-risk patients.

Objectives To assess the utility of a dedicated VRC for baseline evaluation, initiation and goal-directed monitoring of LLT in very high-risk patients following ACS events.

Methodology We conducted a single-centre retrospective observational study of ACS patients. Patients followed-up in the VRC service were included. Data was gathered from the electronic patient records.

Results From an initial cohort of 100 patients, 8 were excluded due to an absence of coronary artery disease (CAD) on angiography. Of the 92 patients with CAD, 39 were already on lipid lowering therapy (LLT), most frequently onatorvastatin (59%).

Of the 53 patients who were LLT-naïve, 88% were initiated on a high-intensity statin on discharge. Prior to commencement of LLT, their baseline LDL-C was 2.89±1.44mmol/L, with a reduction to a mean LDL-C of 1.53±0.97mmol/L at 12 weeks.

Abstract 204 Figure 1

Figure 1. Delivery of care in VRC

LLT – lipid-lowering therapy, VRC – vascular risk modification clinic

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A total of 33 patients (36%) were reviewed in the VRC. All of these patients underwent a 12-week blood test to assess response to therapy in contrast to 23.7% of patients discharged to primary care without VRC follow up. Clear guidance on goal-directed LLT including the ESC guideline-recommended target LDLc (<1.4 mmol/L) and alternative/additional strategies for lipid-lowering therapy (including referral to a lipid clinic, consideration of additional oral and parenteral agents) was provided in writing to primary care in all VRC patients, compared to 1.7% of the comparator group.

Conclusion Our data suggests that the VRC is an effective way of delivering European Society of Cardiology (ESC) guideline-directed recommendations on the management of dyslipidaemia in ACS patients. This model also helps to streamline services and may be extended to other high risk groups including patients with stroke and those with unequivocally demonstrated ASCVD on computerised tomography coronary angiography (CTCA).

Conflict of Interest Nil

Abstract 205 Table 1 Baseline demographics of study population.

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<th>ACS patients</th>
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<tr>
<td>n</td>
<td>92</td>
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<tr>
<td>Age in years (SD)</td>
<td>70.2 (12.4)</td>
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<tr>
<td>Male (%)</td>
<td>70 (76)</td>
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<tr>
<td>History of previous ACS, stroke or FLD (%)</td>
<td>35 (38)</td>
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<tr>
<td>LLT at baseline (%)</td>
<td>41 (44.5)</td>
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<td>LDL-C of those not on LLT in mmol/L (SD)</td>
<td>2.89 (1.4)</td>
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Table 1. Baseline demographics of study population. ACS – acute coronary syndrome, FLD – fatty liver disease, LDL – low density lipoprotein, SD – standard deviation.

Abstract 205 Figure 1

Introduction The 2019 European Society of Cardiology guidelines suggest that there is no role for angioplasty as a first line therapy for stable angina. Medical treatment, with both preventative and antianginal drugs, should form the basis of primary therapy. There has been a move away from invasive coronary angiography toward non-invasive testing for the majority of patients presenting with stable symptoms. Guidelines emphasise that clinicians should be ensuring that patients are on optimal medical therapy to both treat and prevent progression of stable coronary artery disease. Locally, the Rapid Access Chest Pain service (RACPC) offers a fast specialist nurse review, under consultant supervision, based on a departmentally accepted clinical proforma. From RACPC, either angina can be clinically excluded, or depending on risk profile referrals are made for both non-invasive and invasive investigations. Patients deemed to be at particularly high risk may be directly referred for coronary angiography with the option to proceed to PCI as required. Within this patient subgroup, it would be a reasonable expectation that these patients should be started on preventative medication, anti-anginal medication and counselled on risk factor modification.

Methods The local service was audited retrospectively over 3 months in both 2019 (pre covid) and 2021 (during covid). Basic demographic data, symptoms quality and angiogram result were captured. The criteria audited for compliance were as follows:

1. Whether patients were started on, or already on, preventative medication