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**RESULTS:** In the CoP group, the means were: PWV 4.65m/s (5.4 ±4.2); AIX@75 23.22% (40.7±9.3); HR 89.5bpm (119±71); CSBP 97.72mmHg (118±80); CDBP 76.68mmHg (98±61). While in the NI group, the means were: PWV 4.58mmHg (5.2±3.1); AIX@75 21.85% (41.7±5.3); HR 86.3bpm (128±60); CSBP 97.6mmHg (113±80) and CDBP 73.8mmHg (54±91). There was no statistical difference between PWV (p=0.95) and AIX@75 (p=0.63) values between CoP and NI group.

**CONCLUSION:** Although higher values were observed for the CoP group in several hemodynamic and arterial stiffness parameters, no statistical difference was obtained between this group and NI group. However, it is valid to emphasize the importance of further studies in the area to be able to affirm or rule out the influence of the SARS-COV-2 virus on vascular integrity.

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## 200.06

### Impact of the COVID-19 Pandemic on Cardiology Services and Catheterization Volumes in the Second Year: A Comparison of 2020 and 2021 at a South Asian Cardiac Centre

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**Background:** There is little data from South Asia on the impact of the COVID-19 pandemic on cardiology services and cath lab volumes during the 2nd year of the pandemic, particularly considering the delta variant, which had profound regional effects during the second quarter (Q2) of 2021. We aimed to assess this impact at a tertiary cardiac centre in Dhaka, Bangladesh.

**Methods:** Data on patient visits, admissions, procedures and catheterization volumes were collected for January to October 2020 and 2021 via electronic health records. Data were compared for each corresponding month in 2021 and 2020. The difference was expressed as a percentage (%Δ). Data for each quarter (Q1 to Q3) were compared using paired t-test. P < 0.05 was considered significant.

**Results:** Overall, there was a significant increase in cardiology admissions (%Δ 45.54%; p=0.04), outpatient procedures (%Δ 47.39%; p=0.002), cath lab procedures (%Δ 43.24; p= 0.013) and permanent pacing (%Δ 52.46%; p=0.009) in 2021 as compared with 2020. ER visits increased no-significantly by 11.96% in 2021 (p=0.7). Compared to Q1, admissions and cath lab volumes declined in Q2 (coinciding with the delta variant wave), but picked up in Q3, with continuing rise. Despite this Q2 decline in 2021, admissions (p=0.036), outpatient visits (p=0.024) and outpatient procedures (p=0.046) were significantly elevated compared to Q2 in 2020. Further, cath lab volumes were also elevated numerically (p=0.055) in Q2 of 2021, with increasing volumes in Q3.

**Conclusion:** Cardiology services and cath lab volumes had reached almost pre-pandemic levels in Q1 of 2021. Although they declined in Q2, coinciding with the delta wave, they were still higher than corresponding months in the preceding year, indicative of an encouraging adaptation of the healthcare systems to care delivery during the prevailing pandemic.

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## 200.07

### Six-Month Outcomes for COVID-19-Negative Patients With Acute Myocardial Infarction Before Versus During the COVID-19 Pandemic

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**Background:** The Coronavirus disease 2019 (COVID-19) pandemic has changed the way patients seek medical attention and how medical services are provided. We sought to compare characteristics, clinical course, and outcomes of patients presenting with acute myocardial infarction (AMI) during the pandemic compared to before it.

**Methods:** This is a multicenter, retrospective cohort study of consecutive COVID-19 negative patients with AMI in Lithuania from March 11, 2020 to April 20, 2020 compared to patients admitted with the same diagnosis during the same period in 2019. All patients underwent angiography. Six-month follow-up was obtained for all patients.

**Results:** A total of 269 patients were included in this study, 107 (40.8%) of whom presented during the pandemic. Median pain-to-door times were significantly longer (858 [quartile 1=360, quartile 3 = 2600] vs. 385.5 [200, 745] mins, p<0.0001) and post-revascularization ejection fractions were significantly lower (35 [30, 45] vs. 45 [40, 50], p<0.0001) for patients presenting during vs. prior to the pandemic. While the in-hospital mortality rate did not differ, we observed a higher rate of six-month major adverse cardiovascular events (MACE) for patients who presented during vs. prior to the pandemic (30.8% vs 13.6%, p = 0.0006).

**Conclusion:** In conclusion, 34% fewer patients with AMI presented to the hospital during the COVID-19 pandemic, and those who did waited longer to present and experienced more 6-month MACE compared to patients admitted before the pandemic.

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## 200.08

### Outcomes of Acute Coronary Syndrome in Patients With Coronavirus 2019 Infection: A Systematic Review and Meta-Analysis

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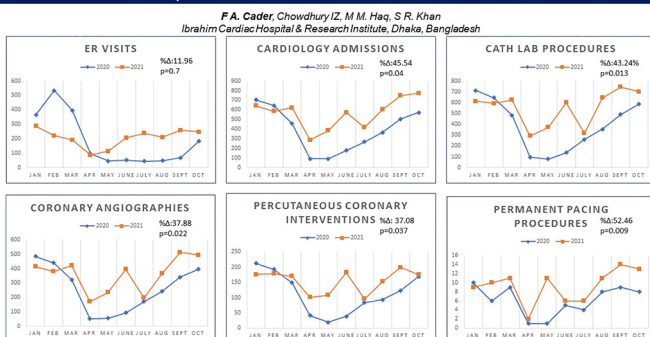
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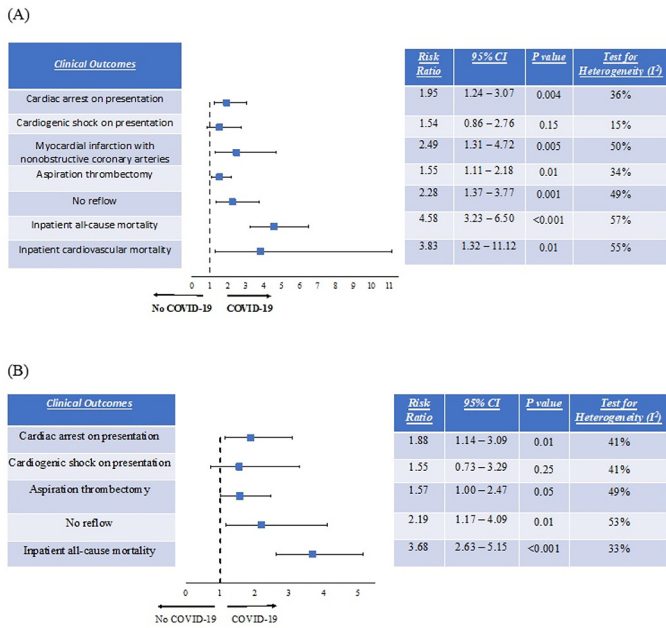
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Impact Of The COVID-19 Pandemic On Cardiology Services And Catheterization Volumes In The Second Year: A Comparison Of 2020 And 2021 At A South Asian Cardiac Centre





**Background** The outcomes of patients with acute coronary syndrome (ACS) and COVID-19 infection are variable. We performed a pooled analysis of studies comparing the outcomes of ACS in patients with COVID-19 versus no COVID-19 infection.

**Methods** Statistical analysis was performed using Revman V.5.3 and Mantel Haenszel risk ratio. Outcomes studied were 1) in-hospital all-cause and cardiovascular mortality; 2) cardiac arrest on presentation; 3) myocardial infarction with nonobstructive coronary arteries (MINOCA); 4) aspiration thrombectomy use; and 5) no reflow phenomenon.

**Results** Nine studies (6,664 patients) met the inclusion criteria. Patients with ACS and COVID-19 infection have 4.6 times and 3.8 times higher risk of in-hospital all-cause and cardiovascular mortality (RR 4.58, 95% CI 3.23 - 6.50, p<0.001) (RR 3.83, 95% CI 1.32- 11.12, p=0.01), respectively, compared to patients without COVID-19. They also have a significantly high risk of cardiac arrest on presentation (RR 1.95, 95% CI 1.24 - 3.07, p=0.004). There was an elevated risk of requiring aspiration thrombectomy (RR 1.55, 95% CI 1.11 - 2.18, p=0.01) and no reflow (RR 2.28, 95% CI 1.37 - 3.77, p=0.001), along with higher risk of MINOCA (RR 2.49, 95% CI 1.31 - 4.72, p=0.005) in COVID-19 patients. Subgroup analysis of patients with STEMI also showed a significantly higher risk of in-hospital all-cause mortality, cardiac arrest on presentation, no reflow, and use of aspiration thrombectomy. Serum C-reactive protein (MD 65.33 mg/L, 95% CI 44.42 - 86.23, p<0.001) and D-dimer levels (MD 1.48 mg/L, 95% CI 0.65 - 2.31, p=0.005) were significantly higher in COVID-19 patients.

**Conclusions** Patients with ACS and COVID-19 have an increased risk of in-hospital all-cause and cardiovascular mortality, as well as higher risk of aspiration thrombectomy use, no reflow and MINOCA compared to no COVID-19 patients.

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**200.09 Myocarditis After COVID-19 Vaccination: A Systematic Review of Case Studies**

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**Background** The coronavirus disease of 2019 (COVID-19) is a global pandemic with over 200 million cases and four million deaths

Characteristics	N (%)	Laboratory and Testing Variables	N (%)	Treatment	N (%)
Age, mean (range), year	25.0 (14-70)	Troponin		NSAID	25 (34.2)
Sex		Elevated	29 (39.7)	Colchicine	17 (23.3)
Male	69 (94.5)	Not elevated	0	Steroids	7 (9.6)
Female	4 (5.5)	Not reported	44 (60.3)	Beta-blocker	7 (9.6)
Vaccine type		cTnI, mean (SD), ng/mL	8.3 (8.7)	IVIG	6 (8.2)
BNT-162b2	47 (64.4)	Peak cTnI, mean (SD), ng/mL	18.1 (15.3)	Aspirin	4 (5.5)
w/ACC-1273	25 (34.2)	hs-cTnI, mean (SD), ng/mL	2.081 (2.459)	ACEI/ARB	3 (4.1)
Ad.26.COV2.S	1 (1.4)	cTnI, mean (SD), ng/L	373.1 (463.5)	Diuretics	1 (1.4)
Vaccine dose		Peak cTnI, mean (SD), ng/L	688.1 (564.9)	Statins	1 (1.4)
First	9 (12.3)	WBC		Clopidogrel	1 (1.5)
Second	64 (87.7)	Normal	15 (20.6)	Not reported	39 (53.4)
Time to onset, mean (SD), day	3.5 (3.82)	Abnormal	8 (10.9)	*Fictitious atrial rhythm, sinus tachycardia, non-sustained ventricular tachycardia, left axis deviation, and incomplete right bundle branch block	
Length of stay, mean (SD), day	5.2 (1.80)	Not reported	50 (68.5)		
<b>Symptoms</b>		WBC count, mean (SD), /µL	8,987 (3,943)		
Chest pain		CRP			
Yes	20 (27.4)	Elevated	34 (46.6)		
No	20 (27.4)	Not elevated	2 (2.6)		
Not reported	33 (45.2)	Not reported	37 (50.7)		
Myalgia		CRP, mean (SD), mg/L	46.3 (41.0)		
Yes	64 (87.7)	ESR			
No	0	Elevated	14 (19.2)		
Not reported	9 (12.3)	Not elevated	13 (17.8)		
Chills		Not reported	46 (63.0)		
Yes	12 (16.4)	ESR, mean (SD), mm/h	52 (71.2)		
No	52 (71.2)	BNP			
Not reported	9 (12.3)	Elevated	2 (2.7)		
Headache		Not elevated	7 (9.6)		
Yes	7 (9.6)	Not reported	64 (87.7)		
No	57 (78.1)	BNP, mean (SD), pg/mL	71.2 (60.4)		
Not reported	9 (12.3)	EKG			
Dyspnea		Normal	3 (4.1)		
Yes	7 (9.6)	ST elevation	57 (78.1)		
No	57 (78.1)	ST depression	2 (2.7)		
Not reported	9 (12.3)	PR depression	8 (11.0)		
T wave inversion		T wave inversion	27 (37.0)		
Others*		Others*	8 (11.0)		
Not reported	9 (12.3)	Not reported	3 (4.1)		
<b>Vital Signs</b>		LVEF			
Temperature, °C	37.8 (0.78)	10 (13.7)			
SBP, mmHg	119.8 (14.1)	<50%	59 (80.8)		
DBP, mmHg	71.6 (11.1)	Not reported	3 (5.5)		
PR, beats per minute	91.4 (18.5)	LVEF, mean (SD), %	53.3 (4.7)		
RR, breaths per minute	18.0 (1.31)				
SpO <sub>2</sub> , %	98.7 (1.32)				

worldwide. Anti-COVID-19 vaccinations have had exceptional success in subduing the incidence, prevalence, and disease severity of COVID-19, but rare cases of myocarditis have been reported after COVID-19 vaccinations.

**Methods** We performed a systematic literature search on PUBMED, MEDLINE, EMBASE, and Cochrane Reviews database from inception to July 18, 2021. Studies were analyzed based on predetermined eligibility criteria.

**Results** A total of 19 studies containing 73 cases of COVID-19 vaccine-associated myocarditis were catalogued. Mean age was 25 years, and male to female ratio was 17:1. For 87.7% of patients, myocarditis occurred after the second dose. Average time to onset and length of hospitalization were 3.5 days and 5.2 days, respectively. Prognosis was benign with 100% recovery. Chest pain (100%); elevation of troponin (100%) and CRP (94.4%); and ST elevation on EKG (81.4%) were common. NSAIDs (73.5%) were the most used medication, followed by colchicine (50%).

**Conclusions** Patients with COVID-19 vaccine-associated myocarditis are usually younger males presenting with chest pain 3.5 days after receiving their second dose. Work-up typically shows elevation of troponin and CRP with ST changes in EKG. Diagnosis is made after excluding all other etiologies. Given significant population benefit from COVID-19 vaccination, physicians should continue to encourage vaccination while remaining vigilant of the very rare occurrence of myocarditis following COVID-19 vaccination.

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**ENDOVASCULAR – Critical Limb Ischemia**

**300.01 Utilization of EKOS (Ultrasound-Accelerated Thrombolysis) in the Treatment of Acute Limb Ischemia: One-Year Outcome Follow-Up**  
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**Background** Acute limb ischemia (ALI) is a serious complication of peripheral arterial disease and critical limb ischemia. ALI can be difficult to treat since it often involves many vessels. If detected early enough, ALI can be treated by various endovascular techniques to quickly revascularize the affected vessels to prevent negative outcomes and future complications. Improvements in endovascular technologies are key to fast and efficient re-perfusion. The purpose of this case series is to analyze the efficacy of EKOS ultrasound-accelerated thrombolysis (Boston Scientific, USA) as a treatment