

	≤7d		8-30 days		Total	
	Events	Events	Events	Events	Event rate (95%CI)	
Device success	-	-	3082	99.5 (99.3-99.8)		
Technical success	-	-	3068	99.1 (98.8-99.4)		
Procedure success	-	-	3032	97.9 (97.4-98.4)		
Death, stroke, systemic embolism	9	7	16	0.52 (0.32-0.84)		
Death, stroke, systemic embolism, and any life-threatening or major bleeding	40	10	50	1.61 (1.22-2.12)		
Individual components						
Death	2	6	8	0.52 (0.32-0.84)		
-Cardiovascular death	2	5	7	1.61 (1.22-2.12)		
Pulmonary embolism	0	1	1			
Cardiac arrest	2	1	3	0.26 (0.13-0.51)		
Hemorrhagic stroke	0	1	1			
Gastrointestinal bleeding	0	1	1			
Unknown cause	0	1	1			
-Non-cardiovascular death	0	0	1			
Pneumonia	0	1	1			
Stroke	7	2	9			
-Hemorrhagic stroke	2	1	3			
-Ischemic stroke	5	1	6			
TIA	1	1	2	0.29 (0.15-0.55)		
Systemic embolism	0	1	1			
-Pulmonary embolism	0	1	1			
Procedural complications	37	0	37	1.20 (0.87-1.65)		
-Vascular access-related complications	3	0	3			
-Device-related complications	12	0	12			
Cardiac tamponade	11	0	11			
Pneumothorax	1	0	1			
Pericardial effusion	20	0	20			
-Others	1	0	2			
Esophageal	1	0	1			
Adverse reaction to anesthesia	1	0	1			
Any Bleeding	39	13	52	1.68 (1.28-2.20)		
LAO Munich consensus classification						
-Any Life-threatening/major bleeding	35	4	38	1.23 (0.90-1.68)		
-Life threatening or disabling	2	3	5	0.16 (0.07-0.38)		
Intracranial	2	1	3			
Intraocular	0	1	1			
Gastrointestinal	0	1	1			
Major bleeding	33	0	33	1.07 (0.76-1.50)		
Pericardial bleeding						
With tamponade	11	0	11			
Without tamponade	20	0	20			
Femoral artery	2	0	2			
-Minor bleeding	3	11	14	0.45 (0.27-0.75)		
BARC classification						
- Type 5	0	2	2	0.06 (0.02-0.23)		
- Type 3	15	1	16	0.52 (0.32-0.84)		
Type 3c	2	1	3			
Type 3b	13	0	13			
-Type 2	24	10	34	1.10 (0.79-1.53)		

CONCLUSION In Chinese centers, patients with a high risk of stroke and moderate-to-high risk of bleeding who underwent implantation of a WATCHMAN LAO device had high rates of procedural success and low rates of short-term ischemic and bleeding events.

OTHERS (UNCLASSIFIED) (TCTAP A-062 TO TCTAP A-066)

TCTAP A-062

An Easy Method to Evaluate Radiation Peak Skin Dose in the Coronary Angiography by Using a Simulating Phantom and Thermoluminescent Dosimeters

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BACKGROUND Recently, the percutaneous coronary interventions (PCI) have increased the average procedural radiation dose. In the meantime, the number of radiation skin damage has increased. Thus, monitoring radiation dose is necessary. In clinical setting, dose-area-product (DAP) and air kerma (AK) are used to estimate patient peak skin dose (PSD). However, these data are calculated by using presumptive mathematic equation, which ignore each individual's characters and different projectors angles. Our study aims to provide an easy method to record and estimate PSD with different tube angulation in PCI setting.

METHODS Thermoluminescent dosimeters (TLDs) were used to measure radiation dose of Hp (10) and Hp (0.07) of skin. We used cine mode with setting of 15 frames per second rate, recorded for 5 seconds and repeated for 5 times. We tested with standard tube angulations, such as posteroanterior view (PA), caudal 35-degree view (CAU 35),

cranial 35-degree view (CRA 35), LAO 65-degree + caudal 20-degree view (spider view), and left anterior oblique 50-degree view (LAO 50).

RESULTS The results showed the caudal 35-degree view had highest radiation dose in DAP, Hp (10) and Hp (0.07). When the zoom-in stage was used, DAP reduced however AK and peak skin dose increased.

CONCLUSION Finally, we used values of skin dose of Hp (10) and Hp (0.07) compared to values of DAP in five groups, the value of PSD is about between 3% to 7% of DAP. By sharing these experiences, we provide an easy practicable method to estimate the PSD in the PCI for each catheterization lab.

TCTAP A-063

Does Carotid Stenosis Lead to Caput Mandibulae Changes?

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BACKGROUND Their search was done with the aim to determine pathological changes in caput mandibulae in patients with stenosis of the external, common or bifurcation zone of carotids. The study included 46 female and male patients aged 50 to 65 years. The patients were divided into 2 groups - 30 and 16 patients with stenosis of the carotids, and without stenosis of carotids but with atherosclerosis, respectively. We studied angiograms to determine the presence and degree of stenosis of the carotid arteries. We used the Hounsfield units for estimation of bone density by computed tomography, for densitometry of the caput mandibulae in patients of both groups. The research revealed: In the first group (with stenosis of the carotid arteries), the mean value of Hounsfield units on the right was 382.6 ± 22.7, on the left - 388.7 ± 19.2. In the second group (without stenosis), the mean value of Hounsfield units on the right was 489.7 ± 18.1; on left - 490.8 ± 17.2. There is a high correlation between carotid narrowing and caput mandibulae density (p < 0.05). Thus, the ischemic changes, a consequence of stenotic lesions of the carotids, lead to pathological changes in the bone tissue of the caput mandibulae.

METHODS The study included 46 female and male patients aged 66.1 ± 1.67 years. The first group included 30 patients with atherosclerotic stenosis of the external, common carotids or bifurcation zone (group 1 - with stenosis). The study included patients with hemodynamically significant stenosis - on average 61.1 ± 2.94% on the right and 66.3 ± 2.85% on the left. The minimum stenosis value on the left is 30%; the maximum stenosis value is 100%.

The second group included 16 patients 66.3 ± 1.69 age, who had atherosclerosis but does not have significant stenosis of the main arteries goes to the organs of the oral cavity (group 2 - without stenosis).

To study the degree of stenosis of the carotids, we investigated angiography and ultrasound duplex scanning (Republican Cardiology Centre, Ufa).

To determine differences, we took patients with significant stenosis on one or two sides. However, there were patients with a significant path with one and insignificant on the other.

We examined computed tomograms of patients in both groups. Hounsfield units were measured at caput mandibulae on the right and left sides (Fig. 1).

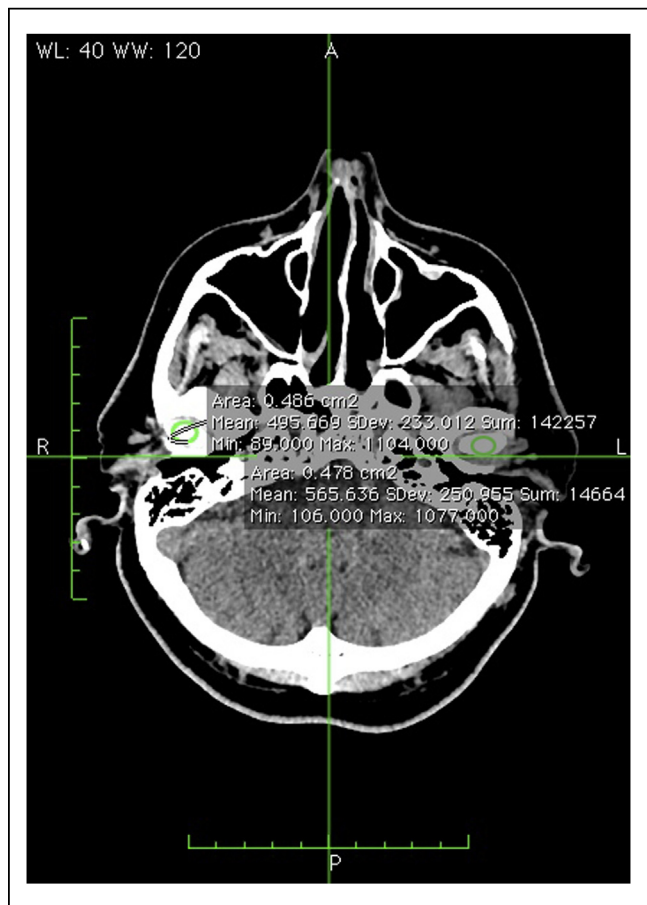
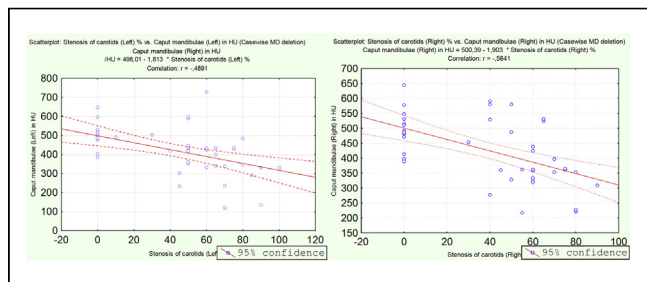
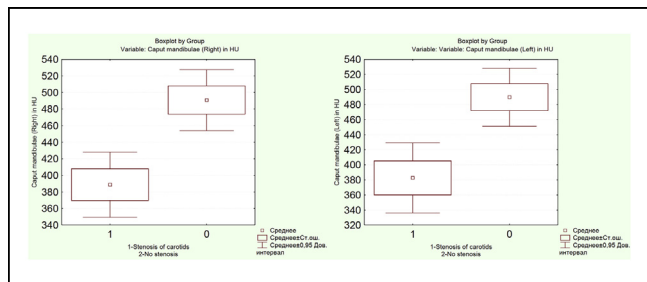
RESULTS In the first group (with stenosis of the carotid arteries), the mean value of Hounsfield units on the right was 382.6 ± 22.7, on the left - 388.7 ± 19.2. In the second group (without stenosis), the mean value of Hounsfield units on the right was 489.7 ± 18.1; on left - 490.8 ± 17.2. We noted a decrease in Hounsfield units in patients of the first group with stenosis compared with patients of the second group (Tab. 2).

When comparing the two groups, Boxplot by Mann-Whitney shows that there is a high correlation between carotid narrowing and caput mandibulae density (p < 0.05) (Fig. 2).

We made the scatterplot of the Hounsfield units in the caput mandibulae depending on the degree of narrowing of the carotids in the patients of the first group on the right and on the left. There is a pronounced correlation with the correlation coefficient r = 0.48 and r = 0.56, respectively (Fig. 3).

The obtained results of the correlation analysis indicate the dependence of pathological changes in the caput mandibulae on the degree of atherosclerotic narrowing of the external carotids, common carotids or bifurcation zone.

		M	CI -95%	CI +95%	Min	Max	σ	m
1 group	Caput mandibulae Left	382,67	336,22	429,12	120,0	730,0	124,39	22,71
1 group	Caput mandibulae Right	388,73	349,28	428,18	217,0	592,0	106,65	19,29
2 group	Caput mandibulae Left	489,75	451,17	528,33	386,0	648,0	72,41	18,10
2 group	Caput mandibulae Right	490,81	454,01	527,61	389,0	644,0	69,06	17,27



CONCLUSION Thus, when comparing groups of patients with atherosclerotic stenosis of the common or external carotid arteries, or bifurcation zone of carotids (group 1), and without stenosis of carotids (group 2), we obtained results indicating statistical differences in the pathology of caput mandibulae in patients of 1 group.

Our data indicate that ischemic changes, a consequence of stenotic lesions of the carotids, lead to pathological changes in the bone tissue of the caput mandibulae.

TCTAP A-064

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

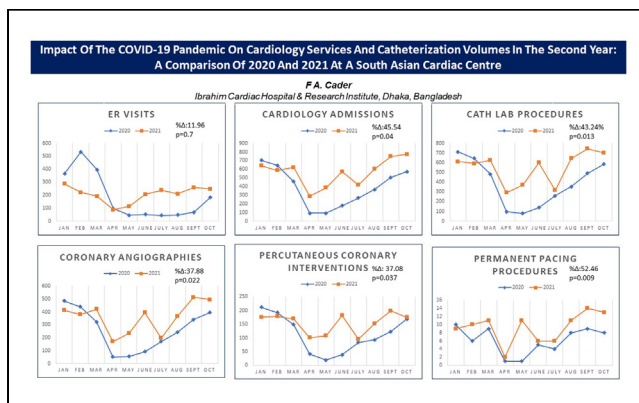
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BACKGROUND Background: There is little data from South Asia on the impact of the COVID-19 pandemic on cardiology services and catheterization laboratory volumes during the second year of the pandemic, particularly considering the novel delta variant, which had profound effects in the region during the second quarter (Q2) of 2021. We aimed to assess this impact from the perspective of 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 hospital electronic records. Comparisons for each corresponding month were made between 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 inpatient admissions (%Δ 45.54%; p=0.04), outpatient procedures (% Δ 47.39%; p=0.002), total 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 by 11.96% overall in 2021 but was not significantly different (p=0.7). As compared with Q1, admissions and cath lab volumes declined in Q2 (coinciding with the delta variant wave), but have picked up in Q3, and continue to increase. Despite this Q2 decline in 2021, total admissions (p=0.036), outpatient visits (p=0.024) and outpatient procedures (p=0.046) were significantly elevated in comparison to Q2 in 2020. Compared to Q2 of 2020, cath lab volumes were also elevated numerically (p=0.055) in 2021, with graphical trends showing increased volumes in Q3.



CONCLUSION Cardiology services and cath lab volumes had reached almost pre-pandemic levels in January and February 2021. Although admissions and catheterization laboratory volumes declined during Q2, coinciding with the COVID-19 surge due to delta variant, 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.