

BACKGROUND:

Currently Bangladesh has been experiencing the pathogen's spike afresh the worst period of the third wave of the COVID-19 pandemic. We aimed to investigate chest CT and clinical findings of COVID-19 patients in the current context of Bangladesh.

METHODOLOGY



Participants:

242 COVID-19 patients were recruited at Chittagong Ma O Shishu Hospital, Chittagong, Bangladesh



Data: From March 2021 to June 2021.

Questionnaire: Survey

Statistical analysis:

- Differences in categorized demographic, clinical features and chronic illness variables between patients with positive radiological and negative radiological findings were tested by the χ^2 -test
- P < 0.05 was taken as statistically significant

RESULTS:

Lung involvement according to the CT scan image findings (N= 242)

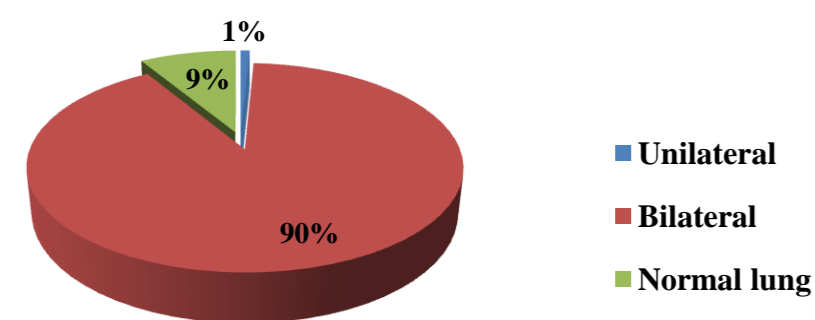


Figure: Lung involvement according to the CT scan

Figure: Abnormal Chest image findings (N=221)

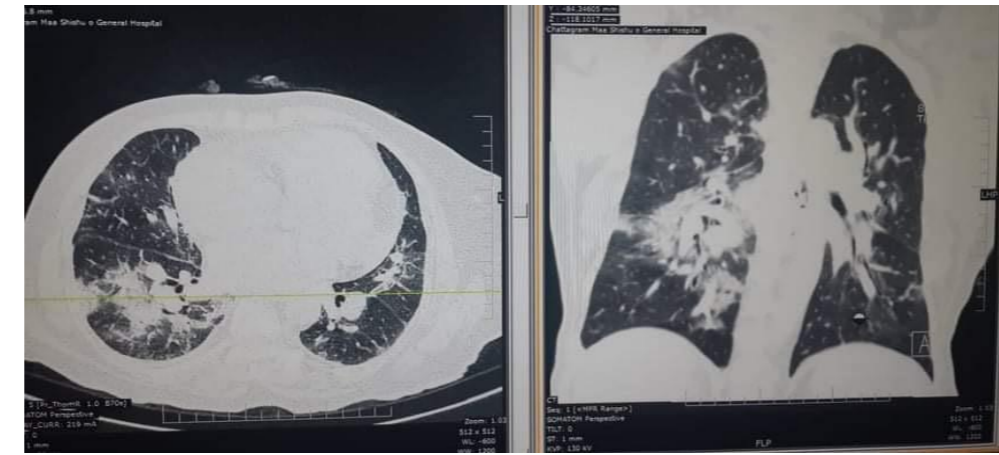
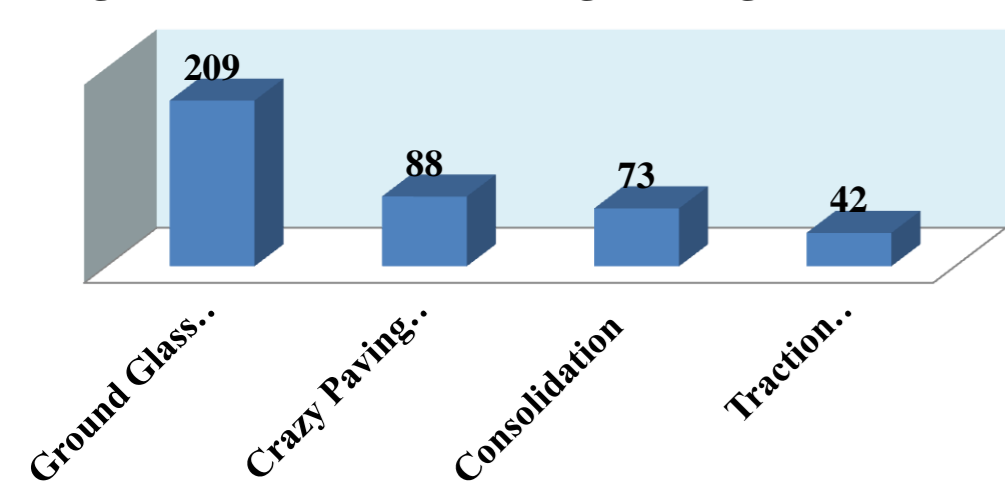


Figure: Atypical lung involvement (Unilateral)

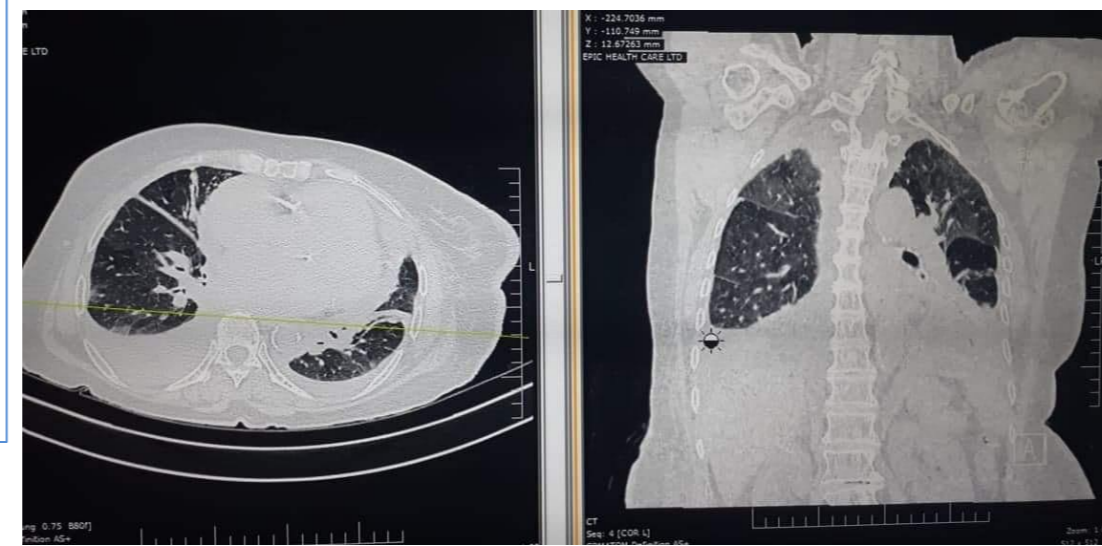
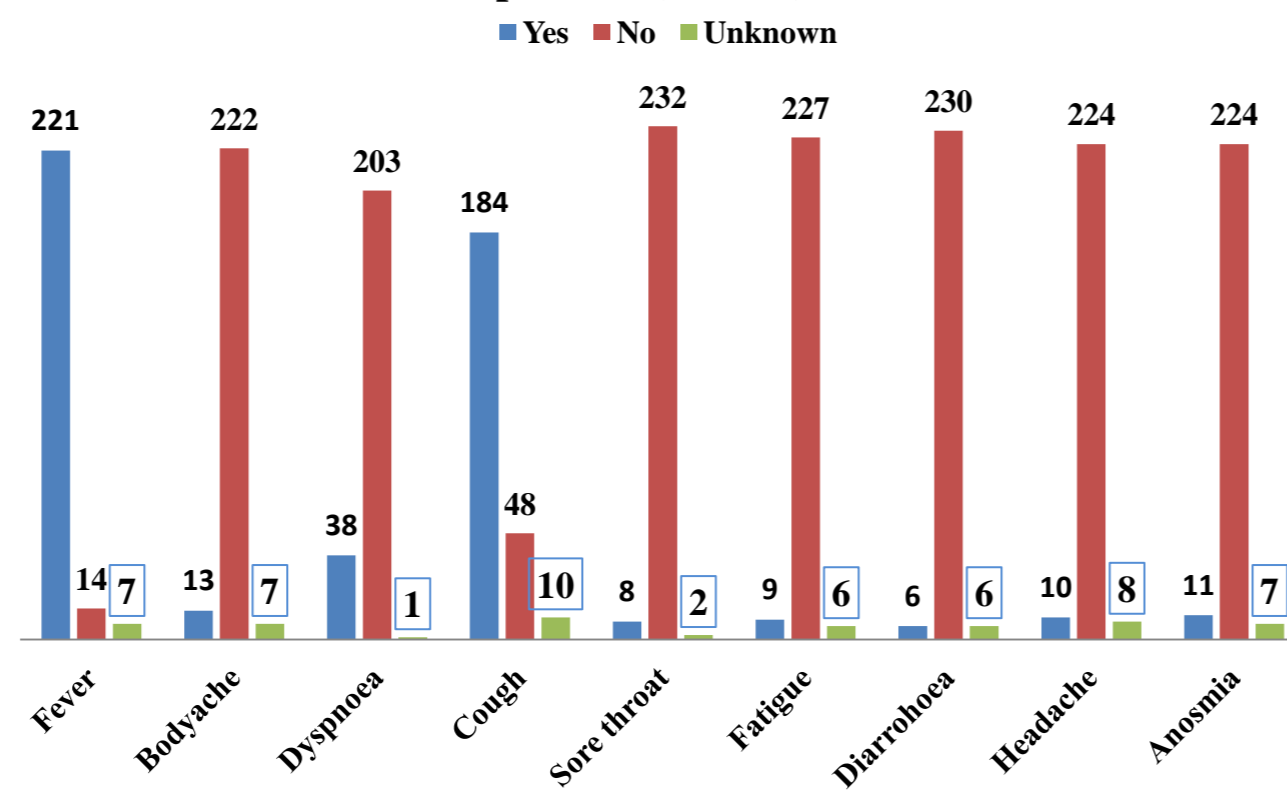


Figure: Bilateral lung involvement (Pleural effusion)

Clinical Features (Signs and Symptoms) of the COVID 19 patients (N= 242)



Factors	Category	Negative Radiological Findings group (N =21)	Positive Radiological Findings group (N =221)	P value
Age	18 -<40	6 (28.6%)	41 (19.2%)	0.44
	41-60	7 (33.3%)	99 (46.3%)	
	61 and above	8 (38.1%)	74 (34.6%)	
Gender	Male	12 (57.1%)	148 (67.0%)	0.36
	Female	9 (42.9%)	73 (33.0%)	
	Unknown	0 (0.0%)	8 (3.6%)	
Residences	Urban	14 (66.7%)	134 (60.61%)	0.47
	Rural	5 (23.8%)	76 (34.4%)	
Comorbidity (1 or more)	Yes	11 (52.4%)	149(67.4%)	0.09
	No	10 (47.6%)	64 (29.0%)	
	Unknown	0 (0.0%)	8 (3.6%)	
Fever	Yes	14 (66.7%)	207 (93.7%)	0.01*
	No	4 (19.0%)	10 (4.5%)	
	Unknown	3 (14.3%)	4 (1.8%)	
Bodyache	Yes	3 (14.3%)	10 (4.5%)	0.02*
	No	16 (76.2%)	206 (93.6%)	
	Unknown	2 (9.5%)	4 (1.8%)	
Dyspnoea	Yes	3 (14.3%)	35 (15.9%)	1
	No	18 (85.7%)	185 (84.1%)	
	Unknown	3 (14.3%)	7 (3.2%)	
Cough	Yes	11 (52.4%)	173 (78.3%)	0.04*
	No	7 (33.3%)	41 (18.6%)	
	Unknown	3 (14.3%)	7 (3.2%)	
Sore throat	Yes	1 (4.8%)	7 (3.2%)	0.52
	No	20 (95.2%)	212 (95.9%)	
	Unknown	0 (0.0%)	2 (0.9%)	
Fatigue	Yes	1 (4.8%)	8 (3.6%)	0.51
	No	17 (81.0%)	210 (95.5%)	
	Unknown	3 (14.3%)	3 (1.4%)	
Diarrhoea	Yes	1 (4.8%)	5 (2.3%)	0.39
	No	18 (85.7%)	212 (95.9%)	
	Unknown	2 (9.5%)	4 (1.8%)	
Headache	Yes	2 (9.5%)	8 (3.6%)	0.17
	No	16 (76.2%)	208 (94.1%)	
	Unknown	3 (14.3%)	5 (2.3%)	
Anosmi	Yes	1 (4.8%)	10 (4.5%)	0.59
	No	17 (81.0%)	207 (93.7%)	
	Unknown	0 (0.0%)	7 (3.2%)	
Chronic Obstructive Pulmonary Disease	Yes	2 (9.5%)	19 (8.6%)	1
	No	19 (90.5%)	195 (88.2%)	
	Unknown	0 (0.0%)	7 (3.2%)	
Hypertension	Yes	7 (33.3%)	112 (50.7%)	0.09
	No	14 (66.7%)	102(46.2%)	
	Unknown	0 (0.0%)	7 (3.2%)	

DISCUSSION:

Majority of the patients presented with fever (89.8%, n=221) and cough 74.8% (n=184), which was similar to the admission symptoms of a study with mild-to-moderate cases done in China and other countries [3-9]

We observed high abnormal chest image findings similar to the Macau and Italy studies [7,8]

Among the abnormal chest image findings; majority (85.4%) of the patients had ground glass opacities (Bilateral/ subpleural and/ peripheral), and crazy paving appearance (84.3%). 29.3% had consolidation, and 16.9% COVID patients had traction bronchiectasis.

We also found, rarely our patients exhibited atypical unilateral lung involvement.

CONCLUSION:

Majority of our patients had lung involvement. We found, radiological findings has no association irrespective of co-morbidities. CT scan is a good radiological modality for screening and detecting the progression of COVID-19, in both high risk and low risk group.

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N, number. Categorical data are expressed as percentage. Categorical data are expressed as percentage. P values were calculated using the aChi-square test for and bFisher's exact test used for the categorical variables. *Significantly different at P < .05.

Conflicting Interest: the authors declared no potential conflicts of interests

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