

Exploring Dos and Don'ts to Corona Virus Exposure

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Editorial

Scientists with their previous experience of viral epidemics in the form of SARS in 2002 and Middle East Respiratory Syndrome MERS in 2012 helped them somehow in understanding the epidemiology, pathogenesis and treatment of COVID-19. COVID-19 was first reported to the WHO office on 31st Dec 2019, from Wuhan, a metropolitan city in the province of Hubei China [1].

In Pakistan the virus entered on 26th February, 2020, when Government of Pakistan officially declared a student of university of Karachi diagnosed as COVID-19 positive, with a travel history of Iran [2]. In Pakistan the literature so far covering the prevalence and incidence is deficient and we found no published data, In Pakistan the so far reported data from government sources declares 11940 confirmed cases with 253 deaths Punjab is the province with highest number of corona cases crossing 5000 [3].

There is limited known about the clinical features, presentation and even the incubation period of this deadly virus, which has an impact on the control and surveillance of an infectious disease. The incubation period of the 2019-nCoV is reported from 6 days to 12 days [4]. The risky populations are close contacts of COVID-19 infected patients, healthcare workers, family members of infected patients. A study from the mainland China reported that the infectivity ratio was (89%) in family members and other

close contacts of COVID-19 patients [5].

To facilitate the healthcare workers working in COVID-19 clinics, management and administration of district Nowshera, of KP state of Pakistan to handle suspects, we thought of to give facts and figures on the impact of positive contact history and its correlation with 2019-nCoV infectivity, and hence we followed few clinical interventions.

History of contact with positive COVID-19 patients was contributing in 62/78(79.48%) confirmed cases. We observed that 55/78(70.51%) of the positive cases had a contact history > 5 days. However this risk of infection is at 3.85% when the duration of exposure is reduced to up to 3 hours approximately. The difference in the duration of contact and its relation with COVID-19 infection in term of positivity of test by PCR was highly statistically significant using Chi-Square test ($p=0.001$) in **Table 1**. The rate of infectivity depends widely on the incubation period that is reported between 2-14 days in the literature and also on the duration of exposure and also on the immune status of the patient to acquire infection [6].

The message is to "STAY AT HOME", Contact history especially to an infected COVID-19 positive person increase the chances of getting infection with 2019-nCoV. Therefore it is suggested that special care should be given to suspects with close contact history with COVID-19 patients.

Table 1: Chances of Viral infectivity vs duration of contact with exposure to a COVID-19 Positive patient.

Chances of Viral infectivity vs duration of contact with exposure to a COVID-19 Positive patient								
		Duration of contact						Total
		2-5 hours	48 hours	3-5 days	>5 days	Not remembered	No Contact	
PCR Categories	Positive	3	7	6	49	3	10	78
	Negative	13	20	90	15	6	23	165
Total		16	27	96	64	9	33	243
Chi-Square test		$p=0.001$		Reliability Index for duration ≥ 5 days (%)	70.51	Reliability Index for duration <3 hours (%)	3.85	

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