



Clinical Picture of COVID19 in Indian Children, Rarity of COVID Toes or Hands

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Short Communication

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The incidence of Covid 19 affecting children and young adults has been around 1 to 2% of total cases. Vast majority of pediatric cases have probably been mild or asymptomatic. However, there are a group of children who present with

serious symptoms requiring hospitalization. We herewith describe Indian experience and varied clinical manifestations of published and unpublished pediatric Covid 19 cases. Majority of the clinical presentations are similar to reported series with few stark differences [1].

Symptom	Sarangi, et al. [2]	Mundlod, Ambike, et al. [3]	Pathak Jabalpur,	Rao,Prabhu, Bodhanwala Wadia Mumbai India [4]	SOURAV BANERJEE, west Bengal India 2020 [5]	Sharmila Ramteke [6]	Sagar Lad , data on file	Personal communication with pediatricians	Total
All cases	178	158	45	123	41	30	50	300	925
Fever	17	49	16	24	9	9		210	334(36.1%)
Cough	8	21	10		5	8		30	82(8.9%)
Sore throat	7	3							10(1%)
Breathlessness		6	8	25	5	3		15	62(6.7%)
Cold	15	7						20	42(4.5%)
Myalgia	4								4(0.4%)
Headache	2	1				1			4(0.4%)
Anosmia, Ageusia-									
Abdominal pain		4		15				5	24(2.5%)
Nausea Vomiting		7	8					10	25(2.7%)
Diarrhoea	2	6						5	13(1.4%)

Lethargy									
Hiccoughs									
Abdominal pain like acute appendicitis, perforation								6	6(0.6%)
Surgical abdomen, pancreatitis									
Cyanosis									
Convulsions			6	13				2	21(2.3%)
Viral encephalitis picture			2					2	4(0.4%)
Conjunctivitis									
Rash								2	2(0.2%)
TSS like Shock but no organisms on culture			4					2	6(0.6%)
Myocarditis, pericarditis, arrhythmia								9	9(1%)
Kawasaki like.			1					2	3(0.3%)
Respiratory failure			4					8	12(1.3%)
ARDS			2						2(0.2%)
Renal failure									
GBS			1					2	3(0.3%)
Optic neuritis								2	2(0.2%)
MIS-C				11			11	7	29(3.1%)
Covid toes									
Asymptomatic			23	27				80	130(14%)
Any other									

Table 1: Shows compilation of clinical manifestations in Covid 19 in Indian children.

Commonest symptom in Indian children as seen in Table 1 is fever in 36.1% cases while the same as reported by Jessica is 48-59%. Sore throat and cold were in 5.5% cases in our data compared to 7-20% [1]. Not unsurprisingly anosmia or agusia is not a common presentation in both. Gastrointestinal symptoms were seen in both the groups (7.2% vs 7-10%).

Data on hospitalized children show that MIS-C (multisystem inflammatory syndrome) is seen in 3.1% of

cases. Similar findings are seen in the Meta analysis in Jessica's report. MIS-C was defined as fever, presence of inflammatory markers, multisystem involvement and temporal association with Covid19 as evidenced by presence of antibodies in blood during hospital stay. This commonality of symptom complex, bio and inflammatory markers differentiates MIS-C from Kawasaki disease. Cardiac involvement, toxic shock like symptoms myocarditis, arteriolar dilation is seen in some of our cases of MIS-C.

Surprisingly no case of Covid toes or hands has been reported in our series. Covid toes and Covid hands have been described affecting children and adults in many countries. The emergence of the COVID-19 world-wide pandemic has been associated with a constellation of cutaneous features in children [7,8]. Among the unusual dermatologic presentations are the so-called COVID toes, inflammatory nodules of feet and toes, sometimes hands and fingers. These are cutaneous chilblain like or acral porne like lesions. The skin over distal parts of feet, toes, hands becomes purple coloured, violaceous, bumpy and sometimes developing into blister like structures. Many patients are RTPCR positive for Covid 19 or some show presence of antibodies. It could be an immune mediated phenomenon producing inflammation of cutaneous blood vessels, capillaries, arterioles. None of the patients reported from India have shown Covid toes or hands. As against that, involvement of larger blood vessels, arteriolar dilatation is seen in some patients with MIS-C resembling Kawasaki. Whether absence of Covid toes and hands is related to higher atmospheric temperatures, more sunlight, dark skin, less moisture, bare feet walking or is coincidental remains to be studied.

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