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Study on pattern of respiratory illness during Covid 19 pandemic in pediatric age group at Rims Ranchi.

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Abstract:
Introduction: *During recent pandemic of Covid 19 human corona viruses have been detected in age of 1 mo-19 years with upper and lower respiratory symptoms but their relationship with severe respiratory illness is little known.*
Objective: *To know about respiratory pattern of illness in Covid 19 positive children Covid 19 positive children aged 1-19 year admitted at RIMS, Ranchi. Nasal and throat swab were tested for HCoV species by RT-PCR. Demographic and medical data were collected medical record department.*
Method *:The present study was conducted in Department .of Pediatrics and new trauma centre ,RIMS, Ranchi, case registered in study was interrogated for detailed history and clinical examinations from January 2020 to December 2020.*
Results*: Among total 138 pediatric age group Covid 19 positive patient admitted at Rims ,Ranchi 64(46%)patients were symptomatic and 74(54%) patients were asymptomatic,90(65%) male and 50(35%) were female. Age group 1mo-5 year 16(11%), 5-12 year 28(20%),more than 12 year 94(68%).Among 64 symptomatic patients 19 patients(29%)had URTI and 4 patients(6%) had LRTI with shortness of breath.*
Conclusion: *In this study of children aged 1mo-19 years with positive Covid 19 admitted at RIMS, Ranchi were asymptomatic and among symptomatic patients had flu like symptoms like fever, cough and cold, sore throat, body ache, loss of taste and smell sensation. Age groups more than 12 years were affected more. Severity of the illness among pediatric age group was less during Covid 19 pandemic.*

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I. Introduction

In December 2019, a cluster of pneumonia cases emerged in Wuhan City, Hubei Province, China. The corona virus disease2019 (COVID-19) is caused by the SARS-coronavirus-2 (SARSCoV-2), a virus primarily zoonotic. WHO has declared COVID-19 a global pandemic and a public health emergency. The spread of the COVID-19 epidemic is unprecedented and it continues to spread affecting many countries and territories around the world [1-3]. Its figures are rapidly changing, and when this is written, as of May 8, 2020, the pandemic has infected more than 3,800,000 people and killed more than 260,000 worldwide; The United States has more than 1,200,000 cases, followed by more than 220,000 in Spain, and more than 215,000 in Italy [4]. Presentations of COVID-19 have ranged from asymptomatic /mild symptoms to severe illness and mortality. Common symptoms have included fever, cough, and shortness of breath. Other symptoms, such as malaise and respiratory distress, have also been described [5].Children (persons aged <18-19 years) are not the face of this pandemic; but they risk being among its biggest victims. While they have thankfully been largely spared from the direct health effects of COVID-19 (at least to date), the crisis is having a profound effect on their wellbeing [6]. While clinical data available to date are based largely on the disease experience in China, Europe, and the United States, the paediatric literature on COVID-19 is still in its infancy and will undoubtedly evolve. Children with COVID-19 are underrepresented in case counts, especially missing data on younger babies [7,8].But, to date it seems that the involvement in children is less, with much milder symptomatology. It is admitted that the percentage of total COVID-19 cases in children is between 1.7% to 2%, with a median pediatric age of 11 years, with 57% males, and they are associated with much lower case fatality rates. Preliminary evidence suggests that children are just as likely as adults to be infected with SARS CoV-2, but less likely to develop symptoms or develop severe symptoms. COVID-19 is mainly a respiratory tract infection with a predominantly mild clinical disease trajectory in most children [7-11].

Fever, dry cough, and fatigue, as well as nasal congestion and runny nose, were the most commonly reported symptoms; gastrointestinal symptoms are observed in infants.Similar to the adult findings, radiographic

findings include bronchial thickening, ground-glass opacity, and evidence of pneumonia [12]. But, less frequent classic signs and symptoms among children vs adults [7,9,10]: Fever, cough, or shortness of breath: 73% of children vs 93% of adults; Fever: 56% vs. 71%; Cough: 54% vs. 80%; Shortness of breath: 13% vs. 43%; Myalgia: 23% vs. 61%.

Usually, most children presenting with fever and cough, and there are more SARS-CoV-2 infections in the upper respiratory tract than in the lower respiratory tract [7,13,14]. Further, it is

(5%-20% cases get to be hospitalized) [12], so they can often be attended by primary care professionals (paediatricians and general practitioners/family doctors). Antibiotics are reserved for patients suspected of having

concomitant bacterial or fungal infections. Immunosuppressed patients are at high risk of secondary infection. Paediatrics cases of COVID-19 infection are typically mild, but underlying co-infection may be more common in children than in adults. This finding may suggest that routine antibacterial treatment could be considered in paediatrics patients. But, in children, their young immune systems, ACE2 receptor levels, and even

exposure to other coronaviruses might play a role in their resilience [15-17]. Despite the lower frequency of respiratory symptom in children compared to adults, COVID-19 is often presented to the paediatrician or general practitioner (GP) as an Acute Respiratory Infection (ARI). ARI is a group of diseases that occur in the respiratory system, caused by different microorganisms such as viruses and bacteria, which startsuddenly. It is the most frequent infection in the world and represents an important public health issue. The respiratory viruses involved in ARIs are the respiratory syncytial virus,influenza, parainfluenza, and adenoviruses. The main symptoms are fever, malaise, stuffy and runny nose, cough, sore throat, expectoration, and difficulty breathing [18,19]. Consequently, the SARS-CoV-2 virus causing the current outbreak of COVID-19 [20,21] is one more etiological agent of

the ARI. In this scenario, this article, which is a personal vision, based on an unsystematic or opportunistic search for information and the author's experience, aims to summarize and reflect on the possible impact of the outbreak of COVID-19 and telecare on the prescription of antibiotics in AIR in children in places where it is not possible to carry out diagnostic tests.

II. Discussion

At present, and as with adults, a confirmed case of COVID-19 in children requires a positive reverse transcriptasepolymerase chain reaction (RT-PCR) test for SARS-CoV-2, based on nasopharyngeal or throat swab. WHO is urging governments to conduct more tests for COVID-19 due to concerns about the failure to report cases in many countries around the world; As more and more nations have introduced stringent measures to try to delay the spread of the virus, the WHO cautions that evaluating the impact of these measures will only be possible with accurate data on the disease. It also warns that a lack of data on how many people have the disease could undermine containment and mitigation effortsin many countries [22].However, the reality is that there is a lack of diagnostic tests or that in many places Health Authorities have a limited ability to test, so the criteria of many countries such as Spain, or the CDC in the United States, to determine who is tested remain extremely strict, at least during March and April 2020: only people who had recently traveled or had contact with someone who had the virus, or people with a clinical picture ofacute respiratory infection admitted to the hospital, or respiratory infection of any degree in health personnel; and similarly, routine diagnostic tests are not performed on

contacts [17,23]. In this scenario, without a definitive diagnosis, where children and minors are a risk group for IRA (for COVID-19, respiratory syncytial virus, etc.), everything conspires so that the healthcare professional Primary (paediatrician, GP) feel the urge to prescribe antibiotics (perhaps even more so than before) in ARI in children, without sufficiently considering the consequences of these inadequate treatments Most cases of COVID-19 in children are mild, and treatment consists of supportive care. While there are several studies underway, no medications or biologics have yet been shown to be effective in the prevention or treatment of COVID-19, and there is currently no vaccine available. IRA is a common presentation in general practice and is linked to high rates of inappropriate antibiotic prescription [23-26]. Inappropriate prescribing of antibiotics is a major public health problem, as it contributes to antibiotic resistance. In the US, medical providers often incorrectly prescribe antibiotics for acute viral respiratory infections, especially during peak influenza season.Antimicrobial therapy is extremely common in US ambulatory care settings and other countries [27,28]. Antibiotics are not recommended for treating uncomplicated IRA, despite this, antibiotic prescribing for IRA is widespread. Paediatricians and GPs report parental pressure and fear of losing patients if they do not prescribe antibiotics, however, parental views on antibiotics for ARI are unclear [29]. Studies about patients ’level of knowledge about antibiotic use converge on the view that it is quite poor, and, in particular, that the erroneous belief that antibiotics are indicated in cases

of viral infections has been widespread [30]. Patient demand is the most common reason given by physicians as a cause for prescription of antibiotics. The related factors motivated the use of clinically unnecessary antibiotics in the face of perceived patient demand are: Physicians want their patients to consider clinical visits as valuable and believe that an antibiotic prescription demonstrates value Doctors want to avoid the negative repercussions of denying Antibiotics

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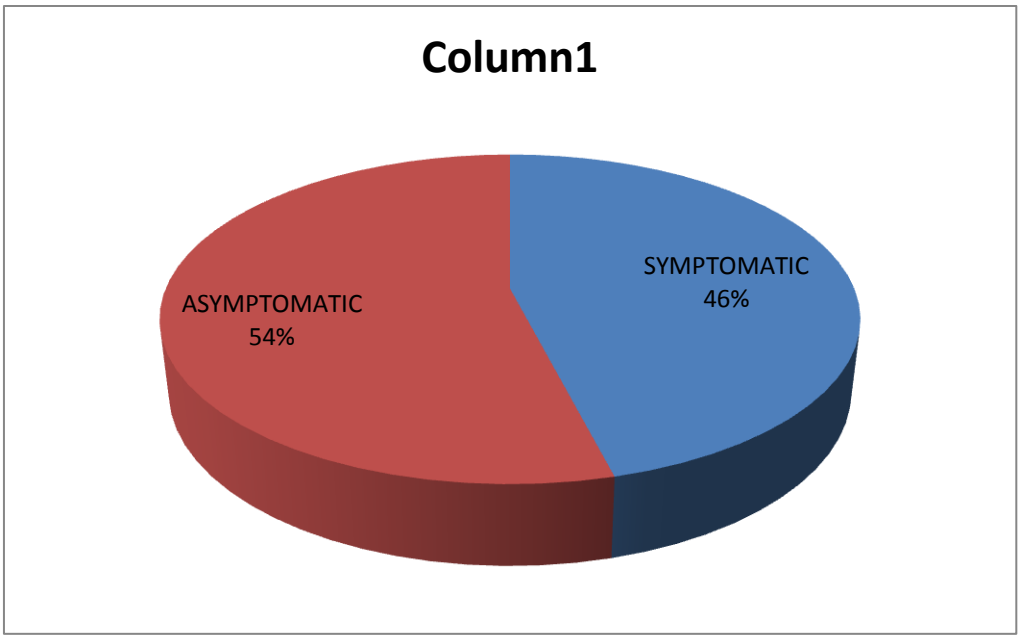
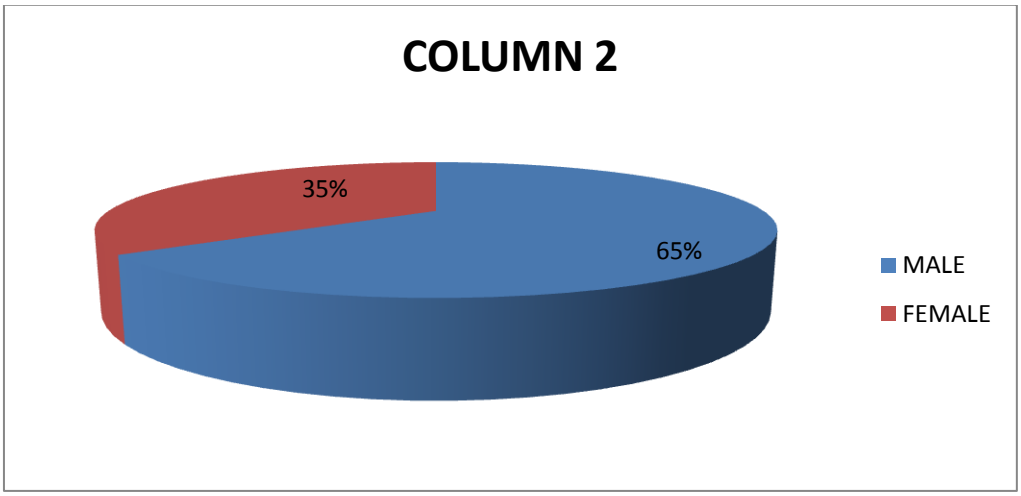
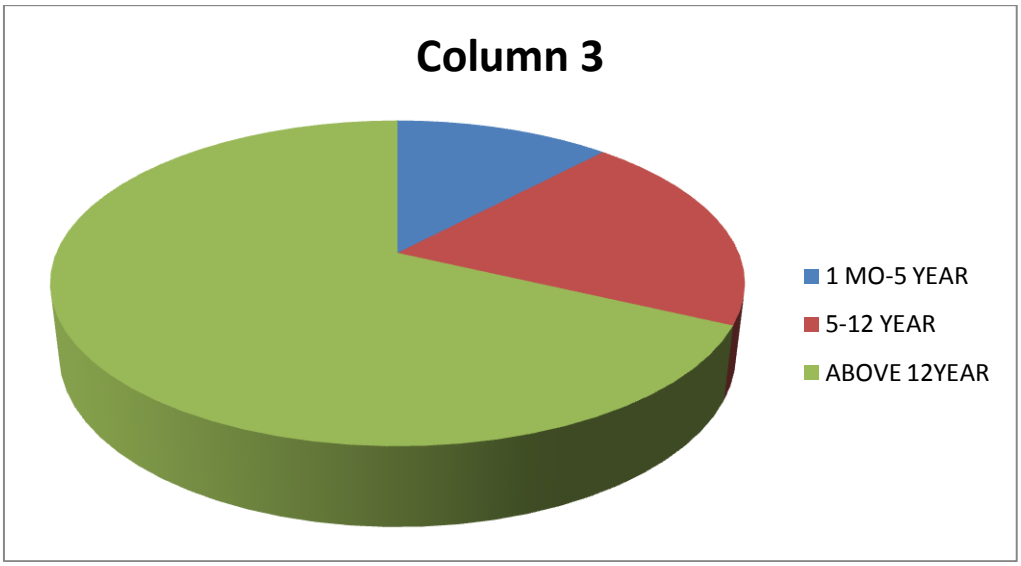
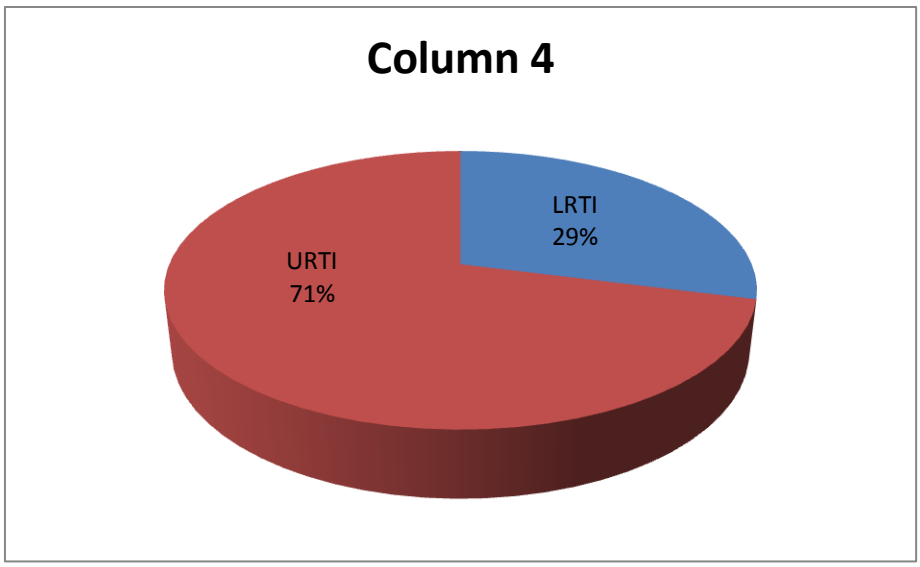
III. Results:

Among total 138 pediatric age group Covid 19 positive patient admitted at Rims ,Ranchi 64(46%)patients were symptomatic and 74(54%) patients were asymptomatic,90(65%) male and 50(35%) were female. Age group 1mo-5 year 16(11%), 5-12 year 28(20%), more than 12 year 94(68%).Among 64 symptomatic patients 19 patients (29%) had LRTI and 45 patients (71%) had URTI with shortness of breath.









IV. Conclusions

In this study of children aged 1mo-19 years with positive Covid 19 admitted at RIMS, Ranchi were asymptomatic and among symptomatic patients had flu like symptoms like fever, cough and cold, sore throat, body ache, loss of taste and smell sensation. Age groups more than 12 years were affected more. Severity of the illness among pediatric age group was less during Covid 19 pandemic.

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