

Case Series

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Psychological morbidity in the context of the COVID-19 pandemic in children and adolescents in Sri Lanka: A case series

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Abstract

The COVID-19 pandemic is the most serious public health crisis of recent times. It relentlessly progressed with no signs of easing. Many suffered due to economic losses, anxieties about contracting the illness, uncertainty of outcomes, social isolation, helplessness, loneliness, loss of loved ones and livelihoods. Children and adolescents are considered as one of the most vulnerable groups to suffer from the consequences of the pandemic. The elaboration and study of the direct and indirect effects of this catastrophe on mental health is an urgent need.

Although there has been renewed interest on the sub-acute and chronic neuropsychiatric sequelae of the infection, studies on psychiatric morbidity among COVID-19 survivors in the pediatric population are scarce. The effects on children and adolescents warrants special study as the impact on the still developing brain may be devastating.

We describe seven cases of new onset psychiatric illness, occurring both in the immediate aftermath of COVID-19 infection in the child/adolescent or in their loved ones, as well as in the context of the psychosocial difficulties faced by them due to the pandemic. These highlight the different mental health presentations among children and adolescents experiencing the effects of the pandemic on their lives. The changes in the social milieu due to the pandemic has added to the pre-existing issues such as poverty and social injustice, delivering a dual-blow on already disadvantaged sections in low and lower-middle income countries such as Sri Lanka.

Keywords: COVID-19, pandemic, mental health, children/adolescents

INTRODUCTION

The COVID-19 pandemic has swept across nations, causing approximately 600 million cases and 6 million deaths worldwide, with 670,685 cases and 16,753 deaths (to date) reported from Sri Lanka. [1] It is the most serious public health crisis of

recent times and shows no signs of easing anytime soon. Many nations suffered grave economic losses amidst lockdowns, and people suffered due to social isolation, uncertainty of outcomes, helplessness, loneliness, anxieties about



contracting the illness, loss of loved ones and livelihoods. Children and adolescents were deprived of social outlets, including schools and confined to their houses for more than a year. Direct and indirect effects of this catastrophe on the mental health of populations is gaining much deserved attention. The effects on children and adolescents warrant special study as the impact on the developing brain may be devastating. [2]

There has been renewed interest on sub-acute and chronic sequelae of the infection, including Long-COVID syndrome in the backdrop of observing long term medical, neuropsychiatric and nonspecific symptoms in adults. However, the evidence base in children and adolescents is limited. [3]

The study of direct biological as well as indirect psychosocial effects of COVID-19 in the causation of psychiatric morbidity in children and adolescents, will make a massive difference in the quality of care provided in both preventive and curative health sectors. The lack of high-quality epidemiological studies exploring the pandemic related mental health problems and evidence-based interventions to tackle them could lead to disorganized haphazard approaches to their management with lack of recognition and accountability.

We describe seven cases of new onset psychiatric illness, in the context of COVID-19 infection among children and adolescents in Sri Lanka. All were polymerase chain reaction (PCR)-confirmed cases of COVID-19 infection. The clinical assessments were done by a consultant child and adolescent psychiatrist with information obtained from patients, parents, teachers and previous treating clinicians. Diagnoses were formulated based on history, mental state assessment and psychometric tests, according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) criteria.

CASE REPORT 1 (Manic episode)

A 13-year-old boy presented two weeks following recovery from mild COVID-19 infection with persistently elevated and irritable mood, increased energy, and grandiosity with reduced need for sleep. Mental state examination revealed distractibility, pressure of speech and euphoric

mood. There was significant disruption in functioning requiring assessment and treatment as an outpatient. There was no past history or family history of psychiatric illness, or substance use. He recovered completely within two weeks of initiation of treatment with Risperidone.

CASE REPORT 2 (posttraumatic stress disorder)

A 19-year-old boy who had received in-patient care at a COVID treatment center presented one month following discharge with persistent anxiety and insomnia in a state of hyper-arousal. The treatment centre was one of many COVID 19 isolation and treatment units established by the Sri Lankan government under the supervision of military. He experienced recurrent, involuntary, intrusive memories of extremely distressing events experienced at the centre including the suffering and deaths of his co-habitants. He frantically tried to avoid any reminders that triggered these memories including speaking to others apart from family, and watching television. He felt estranged and detached from others, and was persistently angry, horrified and shameful. He was diagnosed and managed as PTSD.

CASE REPORT 3 (Panic attacks)

A 10-year-old boy presented ten days following mild COVID-19 infection, characterized by fever, cough and sore throat, which was managed at home. He had started experiencing episodic chest pain associated with palpitations, choking sensations, sweating and a fear that he had post-COVID complications which would result in death. These episodes which lasted several minutes gradually worsened and started occurring several times each day, associated with clinging to and reassurance seeking from his family. He was extensively investigated to exclude medical causes, and responded well to a short course of benzodiazepines and relaxation training.

CASE REPORT 4 (Acute Stress Reaction)

A previously well 12-year-old boy presented in a dazed state with a rapidly changing clinical picture characterized by tearfulness, withdrawn behaviour

with poor meal intake, despair, anger outbursts and over activity with poor sleep. He had started acting as if his body was possessed by his dead maternal grandfather with repeated movements, postures and utterances characteristic of the deceased person. These started two days after his mother was hospitalized with uncomplicated COVID-19 infection. His family had initially taken him to a local Sharman who had performed a 'thovil', a local healing ritual, prior to his presentation to hospital. He recovered completely within 48 hours.

CASE REPORT 5 (Anxiety Disorder, Unspecified with Panic Attacks)

A 6-year-old boy presented with episodic difficulties in breathing, chest discomfort and choking sensations. These were associated with palpitations, trembling and sweating. He was immediately taken to a specialist by his extremely anxious mother, who then sought a second opinion and purchased a nebulizer for home use, all in the space of one week. On assessment, it was revealed that the child's grandfather (who was not a first contact) had contracted COVID the day before the child's birthday, as a result of which his birthday celebrations were postponed. The child had developed a persistent and excessive worry that he and his family would also contract the illness, which was reinforced by his mother's anxiety, which subsequently evolved in to an anxiety spectrum disorder with panic attacks.

CASE REPORT 6 (Depressive Disorder)

A 17-year-old girl diagnosed with type 1 diabetes mellitus presented with pervasive low mood, lack of energy and feeling that she was a burden to her family. Her parents were anxious about frequent reports of serious complications of COVID-19 among diabetics and had restricted her activities and she had been housebound for several months. An aunt had suggested that the girl give up her secondary education in the light of this situation. The family has been extremely cautious resulting in economic losses to her father who was a contract worker. In this context, she felt worthless with loss of all hope in achieving her future goals. Her eating patterns had also become erratic as had

her insulin administration and blood-sugar control. She was diagnosed and treated for a depressive disorder with special interventions targeted for her family.

CASE REPORT 7 (adjustment disorder)

A 14-year-old girl presented with excessive worry about recommencing school associated with irritability, poor concentration, palpitations, and tremulousness and appeared to have given up on all her academic activities, resorting to screen use during greater part of the day. It conspired that their family could afford only one device for online classes and precedence had been given to her sister as she was to sit for her G.C.E. (Ordinary Level) examination. The child, a perfectionist, had missed out on many lessons, and had developed features of an adjustment disorder, in the context of reopening of schools.

DISCUSSION

The first three cases illustrate psychological morbidity in the immediate aftermath of COVID-19 infection in children and adolescents. Cases 4 and 5 describe children whose close family members contracted the illness and the deleterious effect on their mental health. Finally, cases 6 and 7 illustrate the difficulties faced by children and adolescents, due to the psychosocial stressors and changes in the social milieu resulting from the pandemic.

COVID-19 survivors have been found to be at higher risk of suffering from psychiatric illnesses. [4,5,6] A recent review by Gul et al., have concluded that rates of depression, anxiety, PTSD and behavioural addictions, particularly screen addiction have been observed more during the pandemic in children and adolescents. [2]

Although neurotropism and neuroinflammation have been implicated as potential mechanisms for central nervous system involvement in COVID-19 infection, the exact mechanism is still unknown. [4] Aberrant immune responses with increased levels of cytokines leading to effects on the neuroendocrine axis i.e., activation of the hypothalamo-pituitary-adrenal axis is one postulated mechanism. [5] Further study in this

area would not only identify the biological underpinnings of the increased psychiatric morbidity following COVID-19 infection, but would also help to explore new avenues for treatment, including possible use of immunomodulatory therapy. [5] Being a relatively new phenomenon, the psychiatric morbidity associated with COVID-19 infection may have a different course and treatment response to that of established psychiatric disorders and may require more focused bio-psychosocial interventions. In low and low-middle income countries such as Sri Lanka, a complex interplay between pre-existing social disadvantage, breakdown of existing systems, and the additional psychosocial burden of the pandemic is observed. [7]

The resources of the health sector were overwhelmed that adolescents such as the boy in case 2 were exposed to traumatic experiences of suffering and death. Initially, most children were unnecessarily separated from parents with uncomplicated COVID infection prior to initiation of home-based care. Frequent exposure to coronavirus news items (including false information), obtaining information from unreliable sources and having a relative who has suffered from the disease or died have all been shown to be associated with increasing fear of the disease. [2] These factors were universally observed in all seven cases described. Parental anxiety about the illness and the resulting activity limitation in children also emerged as important factors contributing to distress in the children described above. Sri Lanka is a country with a high literacy rate, and most parents have high expectations of academic excellence from their children. The closure of schools from March 2020 with largely unsuccessful online education interventions left most children in despair, dreading reopening of schools. The lower social classes who value and benefit most from free education have unfortunately been the most disadvantaged, due to poverty and lack of resources.

These cases illustrate different facets which may be associated with the increase in psychological morbidity observed in children and adolescents in the pandemic era. Despite the lack of evidence-based guidelines and clear protocols there have been many attempts by mental health

professionals globally to provide primary health care (in the form of psychotherapy, pharmacotherapy, and social interventions including building awareness). [8] The identification and dissemination of knowledge pertaining to presentation of and management strategies utilised in this vulnerable population is essential to increase awareness. However, the research available thus far have not led to stage specific, organized interventions and further scientific study would no doubt be beneficial in planning preventive and curative interventions in this population in the post-COVID era. [8]

Author declaration

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Author contribution

PKDHJLDSR was responsible for patient assessments, literature review, concept, design and writing the manuscript.

DMAD was responsible for assessment supervision, clinical management, concept, revision and approval of final version to be published.

Conflict of interest

Authors declare that there is no conflict of interest.

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Consent to participate

Informed written consent was obtained from all patients.

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