

COVID-19 period, the frequency of pediatric medication decreased as infection rates slowed and the number of patients visiting the hospital due to drug misuse itself decreased. On the other hand, iron/vitamin supplements, which are personal health products, are taken more often. Accordingly, their guardian's drugs have been considered the primary cause of majority of the accidental poisoning cases among children. Among the COVID-19 group, more children visited the ED due to exposure to drugs that may have toxic effects, such as hypertension drugs and hormones, consequently increasing the frequency of blood tests and observation time at the ED. No difference was observed in other treatment or hospitalisation rates. We can reaffirm that toddlers rarely suffer fatal consequences with small amounts of toxic material.

Previous studies have reported that intentional poisoning occurs mainly in adolescents aged 13–18, with more than half occurring among girls and acetaminophen, carbon monoxide, alcohol and psychiatric drugs involved in majority of the causes.^{1,3,4,6-8} The current study found similar results in both the pre- and COVID-19 groups. In particular, we observed an increase in the proportion of multi-drug poisoning. Unlike previous studies, we investigated whether patients with intentional poisonings had a history of psychiatric illnesses or past suicide attempts. However, no difference was observed between the pre- and COVID-19 groups, although more than 70% of the patients had a psychiatric illness and more than 30% had previously attempted suicide in both groups. According to studies published during the COVID-19 period, stronger social distancing protocols made it challenging for patients with an existing psychiatric illness to receive regular psychological care from specialised institutions, which increases the risk of developing psychiatric symptoms among these groups.^{17,18} The results presented herein showed that 19.0% of the patients in the COVID-19 group had a history of more than three suicide attempts. This suggests that adolescents with underlying psychiatric diseases may be more vulnerable to social isolation during this pandemic and can be repeatedly exposed to psychiatric emergencies, such as suicide attempts. Adolescence is an important period where individuals transition into social adults. Throughout this process of maturity, a sense of belonging and interaction with friends are absolutely necessary.¹⁸ However, during severe social disasters, social isolation paralyses daily life, such as school and play, with fear of infection and death of a loved one potentially increasing the risk of poisoning attempts in vulnerable adolescents. Should there be a major interest in implementing quarantine policies to prevent the spread of infection at present, the results of our study may help form the basis for evaluating the impact of such policies on adolescents' mental development and preparing supplementary measures for children with underlying mental diseases in social panic.

This study has some limitations worth noting. First, given that this study was conducted at a regional emergency centre, it does not represent the results of all children and adolescents. In addition, considering the retrospective nature of the study, some information could not be investigated, such as the amount of poisonous substances or the duration from ingestion to visitation. In the future, additional research is needed by prospectively collecting large-scale data.

In conclusion, this study confirmed an increase in the incidence of pediatric poisoning patients visiting the ED and a higher rate of intentional poisoning during the COVID-19 pandemic. Also, the frequency of adolescence and girls' incidence increased, and the use of treatment resources and hospitalization rate increased. Many of the patients with intentional poisoning had a history of mental illness or suicide in the past. Therefore, it seems that policy consideration for mentally vulnerable adolescents during this new pandemic period are necessary.

SUPPLEMENTARY MATERIALS

Supplementary Table 1

The frequencies of therapeutic drugs in accidental poisoning cases

[Click here to view](#)

Supplementary Table 2

The frequencies of therapeutic drugs in intentional poisoning cases

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