

The first six registered pediatric cases with Coivid-19 in Libya: a case study

1. INTRODUCTION

Globally, fewer cases of COVID-19 have been reported in children (age 0-17 years) compared with adults.^{1,2} The number and rate of cases in children have been steadily increasing since March 2020. The true incidence of SARS-CoV-2 infection in children is not known due to lack of widespread testing and the prioritization of testing for adults and those with severe illness. Hospitalization rates in children are significantly lower than hospitalization rates in adults with COVID-19, suggesting that children may have less severe illness from COVID-19 compared to adults.^{3,4,5,6}

Evidence suggests that compared to adults, children likely have similar viral loads in their nasopharynx,⁷ similar secondary infections rates, and can spread the virus to others.^{8,9}

Due to community mitigation measures and school closures, transmission of SARS-CoV-2 to and among children may have been reduced during the pandemic in the spring and early summer of 2020. This may explain the low incidence in children compared with adults.

Comparing trends in pediatric infections before and after the return to child care, in-person school, youth sports and other activities may enhance our understanding about infections in children¹⁰.

Children infected with SARS-CoV-2 may have many of these non-specific symptoms, only have a few (such as only upper respiratory symptoms or only gastrointestinal symptoms), or may be asymptomatic. The most common symptoms in children are cough and/or fever.¹¹⁻¹⁵ A recent systematic review estimated that 16% of children with SARS-CoV-2 infection are asymptomatic,¹⁶ but evidence suggests that as many as half of pediatric infections may be asymptomatic.¹⁷ The signs and symptoms of COVID-19 in children are similar to those of other infections and noninfectious processes, including influenza, streptococcal pharyngitis, and allergic rhinitis. The lack of specificity of signs or symptoms and the significant proportion of asymptomatic infections make symptom-based screening for identification of SARS-CoV-2 in children particularly challenging.¹⁷

2. METHODS

Descriptive case report about the first six registered pediatric cases with Covid-19 in Libya which admitted at Al-Hawari isolation center in Benghazi, from mid of June 2020 to mid of august 2020.

In the beginning of the pandemic the policy was admission of the positive cases regardless the medical condition.

3. RESULTS

Age ranged from one and half year to 10 years, all cases were asymptomatic, and all of them had contacted with confirmed adult cases, with male to female ratio 1:1.

Normal vital signs and normal general examination.

The cases were diagnosed by RT- PCR which were positive in all cases.

Also, Covid-19 IgM were positive.

Inflammatory markers like ferritin and ESR, D-Dimer were within normal range in all cases except procalcitonin which raised in three cases.

CBC and renal function test were normal.

Serum potassium were in upper border line in two cases.

All six cases were with lower vitamin D (which were below 20 ng/ml).

Chest X-ray, Echo and ultrasound abdomen were normal in all cases.

4. CONCLUSION

All the confirm cases get the infection of Covid-19 from their families and all of them were a symptomatic.

That mean the severity of Covid-19 in pediatric is lower than the adult.

5. REFERENCES

1. Stokes EK, Zambrano LD, Anderson KN, et al. Coronavirus Disease 2019 Case Surveillance — United States, January 22–May 30, 2020. *MMWR*. 2020;69:759–765. [doi:10.15585/mmwr.mm6924e2](https://doi.org/10.15585/mmwr.mm6924e2).
2. Williams N, Radia T, Harman K, et al. COVID-19 Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Infection in Children and Adolescents: A Systematic Review of Critically Unwell Children and the Association With Underlying Comorbidities. *Eur J Pediatr*. 2020;10:1-9. [doi:10.1007/s00431-020-03801-6](https://doi.org/10.1007/s00431-020-03801-6)[external icon](#).
3. U.S. Census Bureau. Quick Facts United States. Available at: <https://www.census.gov/quickfacts/fact/table/US/AGE295219#AGE295219>[external icon](#).
4. Centers for Disease Control and Prevention. Demographic Trends of COVID-19 cases and deaths in the US reported to CDC. Available at: <https://www.cdc.gov/covid-data-tracker/index.html#demographics>.

5. Bixler D, Miller AD, Mattison CP, et al. SARS-CoV-2–Associated Deaths Among Persons Aged <21 Years — United States, February 12–July 31, 2020. *MMWR*. 2020;69:1324–1329. [doi:10.15585/mmwr.mm6937e4](https://doi.org/10.15585/mmwr.mm6937e4).
6. Leeb RT, Price S, Sliwa S, et al. COVID-19 Trends Among School-Aged Children — United States, March 1–September 19, 2020. *MMWR*. 2020;69:1410–1415. [doi:10.15585/mmwr.mm6939e2](https://doi.org/10.15585/mmwr.mm6939e2)[external icon](#).
7. Sargent TH, Muller WJ, Zheng X, et al. Age-Related Differences in Nasopharyngeal Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Levels in Patients With Mild to Moderate Coronavirus Disease 2019 (COVID-19). *JAMA Pediatrics*. 2020;174(9):902–903. [doi:10.1001/jamapediatrics.2020.3651](https://doi.org/10.1001/jamapediatrics.2020.3651)[external icon](#).
8. Yonker LM, Neilan AM, Bartsch Y, et al. Pediatric Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2): Clinical Presentation, Infectivity, and Immune Responses. *J Pediatr*. 2020;227:45–52.e5. [doi:10.1016/j.jpeds.2020.08.037](https://doi.org/10.1016/j.jpeds.2020.08.037)[external icon](#).
9. Laws RL, Chancey RJ, Rabold EM, et al. Symptoms and Transmission of SARS-CoV-2 Among Children — Utah and Wisconsin, March–May 2020. *Pediatrics*. 2020;146(6):e2020027268. [doi:10.1542/peds.2020-027268](https://doi.org/10.1542/peds.2020-027268)[external icon](#).
10. Centers for Disease Control and Prevention. COVID-19 Pandemic Planning Scenarios. Available at: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/planning-scenarios.html#table-2>.
11. Dong Y, Mo X, Hu Y, et al. Epidemiology of COVID-19 Among Children in China. *Pediatrics*. 2020;145(6):e20200702. [doi:10.1542/peds.2020-0702](https://doi.org/10.1542/peds.2020-0702)[external icon](#).
12. Götzinger F, Santiago-García B, Noguera-Julián A, et al. COVID-19 in Children and Adolescents in Europe: A Multinational, Multicentre Cohort Study. *Lancet Child Adolesc Health*. 2020;4(9):653–661. [doi:10.1016/S2352-4642\(20\)30177-2](https://doi.org/10.1016/S2352-4642(20)30177-2)[external icon](#).
13. Teherani MF, Kao CM, Camacho-Gonzalez A, et al. Burden of Illness in Households With Severe Acute Respiratory Syndrome Coronavirus 2–Infected Children. *J Pediatric Infect Dis Soc*. 2020;9(5):613–616. [doi:10.1093/jpids/piaa097](https://doi.org/10.1093/jpids/piaa097)[external icon](#).

14. Shekerdemian LS, Mahmood NR, Wolfe KK, et al. Characteristics and Outcomes of Children With Coronavirus Disease 2019 (COVID-19) Infection Admitted to US and Canadian Pediatric Intensive Care Units. *JAMA Pediatr.* 2020;174(9):868-873. [doi:10.1001/jamapediatrics.2020.1948](https://doi.org/10.1001/jamapediatrics.2020.1948)[external icon](#).
15. Mannheim J, Gretschi S, Layden JE, Fricchione MJ. Characteristics of Hospitalized Pediatric Coronavirus Disease 2019 Cases in Chicago, Illinois, March-April 2020. *J Pediatric Infect Dis Soc.* 2020;9(5):519-522. [doi:10.1093/jpids/piaa070](https://doi.org/10.1093/jpids/piaa070)[external icon](#).
16. Assaker R, Colas A-E, Julien-Marsollier F, et al. Presenting Symptoms of COVID-19 in Children: A Meta-Analysis of Published Studies. *Br J Anaesth.* 2020;125(3):e330-e332. [doi:10.1016/j.bja.2020.05.026](https://doi.org/10.1016/j.bja.2020.05.026)[external icon](#).
17. Poline J, Gaschignard J, Leblanc C, et al. Systematic Severe Acute Respiratory Syndrome Coronavirus 2 Screening at Hospital Admission in Children: A French Prospective Multicenter Study. *Clin Infect Dis.* 2020;ciaa1044. [doi:10.1093/cid/ciaa1044](https://doi.org/10.1093/cid/ciaa1044)[external icon](#).