

include increased melanin synthesis (secondary to cytotoxic effect on melanocytes), cutaneous drug accumulation or iron deposits following dermal vascular damage, and increased blood flow to acral areas causes drug deposition [4,5].

Contributors: AC: collected and analyzed data, drafted the paper; PKS: conceptualized, analysed data, drafted and critically appraised the manuscript.

Funding: None; *Competing interest:* None stated.

ANNESHA CHAKRABORTI AND PUNEET KAUR SAHI*

*Department of Pediatrics,
Maulana Azad Medical College, New Delhi, India.
puneetkahi@gmail.com

REFERENCES

1. Khanna N, Rasool S. Facial melanoses: Indian perspective. *Indian J Dermatol Venereol Leprol.* 2011;77:552-64.
2. Bhalla M, Garg S. Acral melanosis. *Pigment Int.* 2018;5:14-27.
3. Vashi AN, Kundu RV. Facial hyperpigmentation: Causes and treatment. *Br J Dermatol.* 2013;169:41-56.
4. Payne AS, James WD, Weiss RB. Dermatologic toxicity of chemotherapeutic agents. *Sem Oncol.* 2006;33:86-97.
5. Pavey RA, Kambil SM, Bhat RM. Dermatological adverse reactions to cancer chemotherapy. *Indian J Dermatol Venereol Leprol.* 2015;81:434.
6. Heidary N, Naik H, Burgin S. Chemotherapeutic agents and the skin: An update. *J Am Acad Dermatol.* 2008;58:545-70.

Coronavirus Disease (COVID-19) With Relevance to Pediatrics

We read with interest the recent article on coronavirus disease (COVID-19) in children [1], which has, to some extent, as far as present knowledge is concerned, explained why children are less affected than the elderly. However, the possible reason why the illness is less, thus far, in our country needs to be highlighted.

We need to first understand the role of ‘trained immunity’. Trained immunity represents an innate immune memory and it is formed by innate immunity cells that become memory cells after antigen exposure. The increased neutrophilic and low lymphocyte counts in COVID-19 patients during the cytokine storm, that occurs with severe deterioration of some patients, supports the hypothesis that innate immune response is both a protective and destructive phenomenon [2].

The WHO statement emphasizing that there is no evidence that BCG protects against SARS-CoV-2 virus infection was made primarily to prevent BCG being used as a prophylactic. The fact that the three studies referred to compared the incidence of COVID-19 cases in countries where the BCG vaccine is used with countries where it is not used and inferred that countries that routinely used the vaccine in neonates had less reported cases of COVID-19 to date [3] may suggest the protective effect of BCG at birth in countries where almost universal BCG vaccination is practiced.

It is known that seroconversion to oral polio vaccine (OPV) and rota virus vaccine has been poor in India compared to the developed world [4]. The frequent viral infections that probably prevent a new virus from getting a ‘foothold’, early immunizations like BCG, measles vaccine, 0-dose OPV, hepatitis B vaccine, maternal Tdap (or Tdvac) and influenza vaccine and exposure to atypical and typical bacterial and fungal infections expose our children to many antigens, which could contribute to effective defense against various infections – indicating the so-called trained immunity.

Telemedicine during the COVID-19 pandemic: The roles of teleconsultation, during a pandemic in outpatient and acute care settings, including virtual intensive care unit (ICU) are diverse [5] and need to be encouraged. Virtual care utilizing video and audio provider-initiated services is a well-established modality to provide direct care to patients. Hospitalized COVID positive cases could be managed by interviewing the parent and/or the adolescent and examining the child using video conferencing. It would be ideal, if possible, to provide high definition camera and digital peripherals, including stethoscopes, otoscopes, ophthalmoscopes, and dermatoscopes for this purpose. In-person visits should remain part of patients' care to ensure provider patient relationship [6]; however, telemedicine could still be deployed to provide direct care and monitoring of these patients. Nursing staff could use the facilities to conduct hourly rounds and limit unnecessary in-room visits. It definitely goes a long way in minimizing exposure of healthcare personnel and, in addition, helps conserve personal protection equipments (PPE). Triaging patients online or telephonically is useful in preventing high-risk patients from exposing others to infection. Prescription generation for in-patient and

outpatient care is time tested, however, automated dispensary systems, or pharmacy robots would reduce patient contact at the pharmacy [7]. Establishment of a telemedicine system; however, requires a robust information technology infrastructure, training of healthcare staff, receptionists, attenders, cleaning staff and security personnel; and introduction of the modifications to integrate hospital workflow. This will entail expenditure and increased cost to the patient. Development of telehealth services have in most parts of the world been hampered by the lack of insurance reimbursement for such services.

Hospitals could also consider the possibility of introducing self-administered nasal swabs for older children and adolescents; this has comparable efficacy to staff-administered swabs [8].

For children with special needs, disruptions in the schedule can be chaotic. They could be accessed through online platforms to develop home-based care programs. Teletherapy also allows the provider to document the care, train parents to maintain a regular schedule, capture sessions on video, chart progress and amend the care plan as needed.

Parents unexposed to this modality of care may be unaware of the usefulness of this form of consultation. They might feel it is impersonal and may not be satisfied with the experience. Patient acceptance can only be achieved with introduction of the often overlooked, but extremely essential operational requirement of patient education and public awareness. With these processes in place and an efficient and coordinated implementation, parents and their children would find contentment with teleconsultations like with other virtual care experiences [9].

Funding: None; *Competing interests:* None stated.
Published online: April, 2020; *PII:* S097475591600164

JEESON C UNNI

Aster Medcity, Kochi, Kerala, India.
jeeson1955@gmail.com

REFERENCES

- Balasubramanian S, Rao NM, Goenka A, Roderick M, Ramanan AV. Coronavirus disease (covid-19) in children – what we know so far and what we do not. *Indian Pediatr.* 2020 Apr 9. Available from: https://www.indianpediatrics.net/COVID29_03.2020/SA-00159.pdf. Accessed April 24, 2020.
- Promptchara E, Ketloy C, Palaga T. Immune responses in COVID-19 and potential vaccines: Lessons learned from SARS and MERS epidemic. *Asian Pac J Allergy Immunol.* 2020;38:1-9.
- World Health Organization. Bacille Calmette-Guérin (BCG) vaccination and COVID-19. Available from: [who.int/newsroom/commentaries/detail/bacille-calmette-gu%C3%A9rin-\(bcg\)-vaccinatio-and-covid-19](http://who.int/newsroom/commentaries/detail/bacille-calmette-gu%C3%A9rin-(bcg)-vaccinatio-and-covid-19). Accessed April 24, 2020.
- Kirkpatrick BD, Colgate ER, Mychaleckyj JC, Haque R, Dickson DA, *et al.* Designed to explore complex biologic problems the “Performance of Rotavirus and Oral Polio Vaccines in Developing Countries” (PROVIDE) Study: Description of methods of an interventional study. *Am J Trop Med Hyg.* 2015;92:744-51.
- Lurie N, Carr BG. The role of telehealth in the medical response to disasters. *JAMA Intern Med.* 2018;178:745-74.
- Daniel H, Sulmasy LS. Policy Recommendations to Guide the Use of Telemedicine in Primary Care Settings: An American College of Physicians Position Paper. *Ann Intern Med.* 2015;163:787-9.
- Rodriguez-Gonzalez CG, Herranz-Alonso A, Escudero-Vilaplana V, Ais-Larigoitia MA, Iglesias-Peinado I, Sanjurjo-Saez M. Robotic dispensing improves patient safety, inventory management, and staff satisfaction in an outpatient hospital pharmacy. *Eval Clin Pract.* 2019;25:28-35.
- Akmatov MK, Gatzemeier A, Schughart, K, Pessler F. Equivalence of self- and staff collected nasal swabs for the detection of viral respiratory pathogens. *PLoS One.* 2012;7:e48508.
- Martinez KA, Rood M, Jhangiani N, Kou L, Rose S, Boissy A, *et al.* Patterns of use and correlates of patient satisfaction with a large nationwide direct to consumer telemedicine service. *J Gen Intern Med.* 2018;33:1768-73.

Do Not Neglect the Children: Considerations for COVID-19 Pandemic

The crisis of coronavirus disease (COVID-19) pandemic is the greatest challenge we have faced since World War II

[1]. Although children are less commonly infected, and severity of disease in children is usually mild, no one is completely immune to this disease [2]. Most of the reported cases of COVID-19 infection in children show a complete recovery in one to two weeks; however, those with serious underlying medical conditions are at a higher risk [3].

The reason behind the lower prevalence of COVID-19