

2. Kumar RK, Das H, Girish SV, Nevilebasappa A. Prevalence of vitamin D deficiency among newborns. *Indian Pediatr.* 2020;57:258-9.
3. Randev S, Kumar P, Guglani V. Vitamin D Supplementation in childhood - A review of guidelines. *Indian J Pediatr.* 2018;85:194-201.
4. Khadilkar A, Khadilkar V, Chinnappa J, *et al.* Prevention and Treatment of Vitamin D and Calcium Deficiency in Children and Adolescents: Indian Academy of Pediatrics (IAP) Guidelines. *Indian Pediatr.* 2017;54:567-73.
5. McGovern M, Giannoni E, Kuester H, *et al.* Challenges in developing a consensus definition of neonatal sepsis. *Pediatr Res.* 2020;88:14-26.
6. Dabas A, Bharadwaj M, Shah D, Gupta P. Online survey of vitamin D supplementation practices in children and adolescents. *Indian Pediatr.* 2020;57:749-50.

AUTHORS' REPLY

We thank the readers for taking interest in our study [1]. As rightly pointed out, levels for vitamin D deficiency have been a source of contention. The International Association of Endocrinology defined a vitamin D level of 21-29 ng/mL as insufficiency and <20 ng/mL as deficiency in adults [2]. However, the levels of vitamin D insufficiency and deficiency are not clearly defined and the discussion about the prevalence of vitamin D deficiency is ongoing [3]. The cut-off levels used in our study were based on a study in neonates [4], as we did not have Indian guidelines in place at that time. IAP consensus statement on vitamin D [5] was published after we completed our study. Indian studies can now be done taking these values as guidelines for our population. Association of dose relationship of severity of vitamin D deficiency with sepsis and odds ratio will definitely provide information on risk stratification, and other researchers are encouraged to address this.

Sepsis in neonates still needs definitions that can be followed practically by neonatal centers. The definition used by

us was the most practical in our setting, as it has taken clinical criteria and laboratory investigations as parameters in a scoring system for defining sepsis [6]. Non availability of micro ESR in our setup prevented us from using neonatal sepsis definitions which incorporate it in the scoring system [7].

VAISHALI NAYAN BHAI

*Surat Municipal Institute of Medical Education and
Research in Pediatrics
Surat, Gujarat, India.
chaudharivaishali400@gmail.com*

REFERENCES

1. Singh P, Chaudhari V. Association of early-onset sepsis and vitamin D deficiency in term neonates. *Indian Pediatr.* 2020;57:232-4.
2. Holick MF, Binkley NC, Bischoff-Ferrari HA, *et al.* Endocrine Society. Evaluation, Treatment, and Prevention of Vitamin D Deficiency: An Endocrine Society Clinical Practice Guideline. *J Clin Endocrinol Metab.* 2011;96:1911-30.
3. Shah D, Gupta P. Vitamin D deficiency: Is the pandemic for real? *Indian J Community Med.* 2015;40:215-7.
4. Cetinkaya M, Cekmez F, Buyukkale G, Erener-Ercan T, Demir F. Lower vitamin D levels are associated with increased risk of early-onset neonatal sepsis in term infants. *J Perinatol.* 2015; 35:39-45.
5. Khadilkar A, Khadilkar V, Chinnappa J, *et al.* Prevention and Treatment of Vitamin D and Calcium Deficiency in Children and Adolescents: Indian Academy of Pediatrics (IAP) Guidelines. *Indian Pediatr.* 2017;54:567-73.
6. Puopolo JP, Eichenwald EC, Stark AR. Bacterial and fungal infections. *In: Manual of Neonatal Care Cloherty, 6th Edition, Lippincott Williams and Wilkins; 2008.p.274-300.*
7. Singh M. 16 Perinatal infections. *In: Care of the Newborn. 8th edition, CBS publishers and distributors: 2015. p.267-98.*

Using Whatsapp to Facilitate Inter-institutional Patient Transfer

Social media and messaging services like WhatsApp have found an important place in the medical field and patient care. It has been widely used for intra-institutional referral, patient awareness and medical education [1], and also for telemedicine [1,2]. However, its use in inter-institutional referrals and patient transfer is not widely documented.

Lack of a proper referral system affects patient care as many are referred to tertiary centers due to non-availability of specialized services in local hospitals. In majority of the cases the referrals are not planned, and it is not through institutional

mechanisms. Hence, the patients visit the hospital on their own, and may face refusal. This causes significant delay in treatment which contributes directly to morbidity and mortality. We used WhatsApp as a medium to facilitate transfer of pediatric patients, including neonates, from pediatric department of one hospital (which does not have pediatric surgical support) to our tertiary care hospital. The WhatsApp group included the consultants and residents of the concerned department from both the hospitals. Patient details, investigations (biochemistry, hematological and radiological) are initially uploaded on the group. We assess the case on the messenger and coordinate the transfer. The patient is then transferred to us in an ambulance with an accompanying doctor. Our team saves a lot of precious time in investigating these patients as they have already been done as per our requests, and surgery is planned at the earliest based on the indication and patient condition. The total number of cases transferred since the creation of this group (June, 2019) was 182 (140 newborns and 42

older children). Surgical findings and the post-operative course of the patient is also shared with the other team, which results in their learning process. Many patients follow-up at the referring hospitals after the surgical problems have been taken care of.

There are; however, certain minor drawbacks of this system. During the initial days, some children with surgical problem were referred to our hospital and when we took consent for surgery, the parents refused. We improvised by ensuring that the referring hospital took consent for transfer and possible surgical intervention before updating patient details on Whatsapp. Another aspect which needs attention is that sensitive patient data is being shared and retained on this platform. We have devised a two-pronged solution to this problem. Firstly, keeping record of all patients physically (either analog or digital) at the referred hospital and periodically delete all archived data. Lastly, taking consent from parents, regarding sharing of their patient's details by this method for the purpose of transfer. We prefer the latter as the archived data can be used for retrieving patient details later, as was done in this study. The archived data is also a very vital tool to follow-up patients, by either of the two institutions. We suggest use of newer communication methods for ensuring adequate referral and management of patients, particularly in countries which lack an organized infrastructure to support such services.

SUJOY NEOGI* AND SHASANKA SHEKHAR PANDA
*Department of Pediatric Surgery,
 Maulana Azad Medical College,
 Delhi, India.
 drsujoyneogi@yahoo.com

REFERENCES

1. Giansanti D. WhatsApp in mHealth: An overview on the potentialities and the opportunities in medical imaging. *Mhealth*. 2020;6:19.
2. Telemedicine Practice Guidelines. 2020. Accessed June 10, 2020? Available from: https://www.mciindia.org/CMS/wp-content/uploads/2019/10/Public_Notice_for_TMGS_Website_Notice-merged.pdf
3. Othman M, Menon V. Developing a nationwide spine care referral programme on the Whatsapp messenger platform: The Oman experiment. *Int J Med Inform*. 2019;126:82-5.
4. Joshi SS, Murali-Krishnan S, Patankar P, Choudhari KA. Neurosurgical referral service using smartphone client WhatsApp: Preliminary study at a tertiary referral neurosurgical unit. *Br J Neurosurg*. 2018;32:553-7.
5. Morkel RW, Mann TN, Preez GD, Toit JD. Orthopaedic referrals using a smartphone app: Uptake, response times and outcome. *S Afr Med J*. 2019;109:859-64.

Rat Hepatitis E in an Immunocompromised Patient

We recently managed a teenage patient in whom rat hepatitis E virus (HEV) was detected in blood by a real-time RT-PCR assay during investigation of worsening cholestasis. The patient developed cholestasis in the course of a very complicated history of acute myeloid leukemia including relapse after failed hematopoietic system cell transplant, graft versus host disease, cytomegalovirus infection, and staphylococcal septicemia. The pediatricians had no experience in managing this infection. To aid understanding, management and counseling, we performed a PubMed search using the keywords "Rat hepatitis E" and noted only three publications describing rat HEV infection in humans [1,2]. Two of these publications were from Hong Kong and one from Canada. According to the latest epidemiological data from the Hong Kong Center for Health protection, there have been 14 confirmed cases of rat HEV in Hong Kong between the years 2017 and 2020, including the current case. Rat HEV is an under-recognized cause of hepatitis infection, which is missed by commonly performed molecular diagnostic assays for hepatitis E. Serological assays may cross-react between human and rat HEV, but have been known to miss cases of rat HEV, especially in immunocompromised persons [3]. The source of rat HEV infection in our patient is uncertain at the time of writing but screening of archived rodent samples showed that rat HEV

circulates in rats in Hong Kong [3].

Viral hepatitis, including HEV is a notifiable disease in Hong Kong. Sanitation is the most important measure in prevention of hepatitis E, consisting of proper treatment and disposal of human waste, higher standards for public water supplies, improved personal hygiene procedures, sanitary food preparation and pest control [4]. Cooking meat at 71°C for five minutes kills the hepatitis E virus.

Zoonotic HEV is also a potential threat to the blood product supply [4,5]. The viral load in blood products required to cause transfusion-transmitted infection is variable. Transfusion transmission of hepatitis E virus can be screened via minipool HEV nucleic acid testing [5]. There have been no large randomized clinical trials of antiviral drugs. Oral ribavirin has been found to be an effective antiviral for chronic HEV infections in immunocompromised people [4]. Immuno-suppressive therapies should be reduced to aid clearance of HEV in these patients [4].

We wish to underscore that sanitation and handwashing are the most important measure in prevention of hepatitis E, as with many other diseases, including the currently circulating coronavirus.

KAM LUN HON^{1*} AND S SRIDHAR²

*¹Department of Pediatrics and Adolescent Medicine,
 The Hong Kong Children's Hospital; and*

*²Department of Microbiology,
 The University of Hong Kong; Hong Kong.
 ehon@hotmail.com