

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
¹*Department of Pediatrics and Adolescent Medicine,*
The Hong Kong Children's Hospital; and
²*Department of Microbiology,*
The University of Hong Kong; Hong Kong.
**ehon@hotmail.com*

REFERENCES

1. Sridhar S, Yip CCY, Wu S, *et al.* Rat hepatitis E virus as cause of persistent hepatitis after liver transplant. *Emerg Infect Dis.* 2018;24:2241-50.
2. Andonov A, Robbins M, Borlang J, *et al.* Rat hepatitis E virus linked to severe acute hepatitis in an immunocompetent patient. *J Infect Dis.* 2019;220:951-5.
3. Sridhar S, Yip CC, Wu S, *et al.* Transmission of rat

hepatitis E virus infection to humans in Hong Kong: A clinical and epidemiological analysis. *J Hepatol.* 2020; hep. 31138.

4. Nelson KE, Heaney CD, Labrique AB, Kmush BL, Krain LJ. Hepatitis E: Prevention and treatment. *Curr Opin Infect Dis.* 2016;29:478-85.
5. Dreier J, Knabbe C, Vollmer T. Transfusion-transmitted hepatitis E: NAT screening of blood donations and infectious dose. *Front Med.* 2018;5:5.

Medical Education Adjustments Amid COVID-19: UK Medical Students' Views

The coronavirus disease 2019 (COVID-19) pandemic has caused unprecedented disruptions worldwide. Medical educators have had to respond promptly to ensure future physicians' competency and training. Sahi, *et al.* [1] share their thoughts on the pandemic's implications to medical education. As UK medical students, we offer our perspective on adjustments to pre-clinical and clinical education.

Before the COVID-19 pandemic, UK pre-clinical teaching was already being digitalized through online lectures and "flipped classrooms". Indeed, students often opt for e-learning which enables content consumption at individual pace, allowing users to pause and revisit teachings. The universal popularity of Free open access medical education (FOAMed) amongst undergraduates and postgraduates also supports the shift to e-learning [2]. In addition, during the pandemic, students have innovated ways to educate peers remotely through online platforms, such as social media and Zoom [3]. Nevertheless, while remote digital education has become the new norm, we agree with the authors that there are limitations to this transition. We have lost the sense of community and camaraderie between students sitting in lecture theatres together, as well as the ability to interact directly with lecturers. Problems with time-management, self-motivation, and dependence on technologies and stable broadband connection are increasing issues. Additionally, we feel that physiology practical sessions and anatomy dissection sessions have not been adequately replaced by virtual learning. Thus, further innovation is required to retain the advantages of face-to-face teaching.

Meanwhile, clinical placements, including community-based medicine for pre-clinical students and hospital placements for clinical students have been suspended in the UK

since March. Although simulators, telemedicine and other technologies are possible alternatives, clinical teaching is best achieved in clinical setting [4]. Face-to-face experiential learning from patient interactions is undoubtedly irreplaceable at this point in time. Yet, before resuming clinical placements, it is crucial for educators to balance education, service, and students' safety and wellbeing. In a recent survey, two students have reported concerns for themselves as well as housemates, family members and patients over coronavirus infection and spread [5]. Therefore, whilst aiming to minimize infection risk, educators should communicate frequently with students allowing them to share their concerns, and provide support when needed.

COVID-19 has imposed significant challenges to medical education. Although troublesome, the current crisis presents a unique opportunity to accelerate evolution in medical training. Students, educators and physicians must seize the moment and innovate ways to deliver safe and high-quality care and education.

MIN SUN^{1*} AND KATHRINE S RALLIS^{2,3}

From ¹Birmingham Medical School, University of Birmingham, Birmingham, UK; ²Barts Cancer Institute and ³The London School of Medicine and Dentistry, Queen Mary University of London, London, UK.

*MXS1281@student.bham.ac.uk

REFERENCES

1. Sahi PK, Mishra D, Singh T. Medical education amid the COVID-19 pandemic. *Indian Pediatr.* 2020;57:652-7.
2. Chan TM, Stehman C, Gottlieb M, Thoma B. A short history of free open access medical education. The past, present, and future. *ATS Scholar.* 2020;1:87-100.
3. Rose S. Medical student education in the time of COVID-19. *JAMA.* 2020;323:2131-32.
4. Lim ECH, Oh VMS, Koh D-R, Seet RCS. The challenges of 'continuing medical education' in a pandemic era. *Ann Acad Med Singap.* 2009;38:724-6.
5. Gallagher TH, Schleyer AM. "We signed up for this!" – Student and trainee responses to the Covid-19 pandemic. *N Engl J Med.* 2020;382:e96.