

Tele-Medicine in Hepatology and Gastroenterology Care: A Necessity or Novelty

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Telemedicine or Telehealth, defined as the delivery of health care services at a distance using electronic means for both diagnosis and treatment where both the patient and health care provider are not in direct contact as classically practiced, it holds tremendous promise to increase access to broadly specialty care [1]. The use of telemedicine has evolved over time. Initially, it was a platform for exchange of knowledge and correction of misconceptions [2]. Later, evolved for teleconsultations and whole patient assessment and giving prescriptions [3]. The infrastructures needed for establishment of telemedicine are cheap and applicable and it have been tried in many diseases with many publications documenting the efficacy in delivery of health care services [4]. The benefits of telemedicine are not limited to access too many healthcare services, avoid driving time to health care facilities, avoid waiting time, and avoid gathering of people to decrease infection risk. Telemedicine allows enhanced patient-to-physician communication, allowing select high risk patients prone to develop more severe disease (risk stratification) for emergency room physical evaluation, and this eventually will reduce the burden on health care systems [4,5], it is a low cost process and it is widely accepted by patients [1,6].

Telehealth has become a central piece in patient healthcare delivery during COVID-19 pandemic era. Telehealth allows health care services to reach

patients in their homes, keeping other patients safe through social distancing and maintaining self-quarantine [7]. Several modes of implementation are useful to overcome difficulties for patient care during the pandemic. Its benefits are specific to different fields of medical practice. Such benefits, along with the guidance and reported experiences should invite health systems to work for an effective and comprehensive implementation of telemedicine in various fields [8].

Performing the equivalent of a complete clinical examination by telemedicine would be unusual. However, components of a more traditional clinical examination are part of the telemedicine workup for specific conditions. Telemedicine clinical examinations are facilitated, and enhanced, through the integration of a class of medical devices referred to as telemedicine peripherals (e.g. electronic stethoscopes, teleophthalmoscopes, video-otoscopes, and so forth). Direct-to-consumer telehealth is a rapidly expanding segment of the health care service industry [9].

In the field of hepatology and gastroenterology, telemedicine have been practiced with early applications were in hepatitis C management. First, it was used to share knowledge and experiences from specialists to primary-care providers [2]. Later, the spectrum of applications expanded. Currently, telemedicine is incorporated to deliver health

information, diagnose different diseases, assess the severity of others [6], prioritize patients for emergency visits, and organ transplantation including liver transplantation and also to treat and revise medications of different diseases [4,5,10] and the future is open for further expansion that lies in parallel to advancement in the technology.

Hepatitis C virus (HCV) treatment through telemedicine is achievable and highly effective with overall SVR 97%, irrespective of the underlying genotype (GT) or directly acting antiviral (DAA) regimen used and can eliminate HCV in this microenvironment and consequently, reduce the overall burden of HCV [11].

In this issue in Afro-Egyptian journal of Infectious and Endemic Diseases; an article titled "During the Era of Pandemic Corona Virus Disease 19, is Telemedicine Effective in the follow-up of Hepatitis C Virus Patients Receiving Direct anti-Viral Therapy?" by Hassnine et al. [12], discussed the efficacy of telemedicine in following a cohort of 300 chronic HCV patients under DAAs. The patients were evaluated for treatment before and during the era of COVID-19 according to the latest Egyptian practice guidelines. The author concluded that use of telemedicine in the follow up of chronic HCV patients during treatment is as effective as the classic way and safer especially in the era of pandemic COVID19.

The study seems interesting and it emphasizes the previous reports which favors the promising role of telemedicine in management of different diseases in hepatology and gastroenterology [5]. The issue of telemedicine is relatively new to the Egyptian practice and per the current study the door is now open for further expansion of telemedicine. Another additive value of the current article is increasing the popularity of telemedicine among both patients and health care providers. We think that, this experience will continue even after the pandemic is over.

However, there are many points that were not clear and others that were not answered in the current study. There were no head to head comparison with the classic physical assessment within the same period of the study. We believe this comparison to shade the light on the subtle disadvantages of telemedicine, if any. Furthermore, it was not clear is telemedicine is effective for long term follow up of this category

of patients or not. The infrastructures essential for telemedicine were not appraised. A large portion of the Egyptian community reside in the countryside with limited access to the technology in particular fast net connections and also the lack of experience to deal with modern technology. Furthermore, it is not clear how much the drop out figures from the virtual visits. It is expected to have some drop outs of virtual visits due to technical difficulties described above and patient/physician reluctance while in the classic physical visits the drop outs are usually low because per the Egyptian protocol dispensing the medications mandates both patients' attendance and filling the file with scheduled investigations and furthermore by the end of treatment and by the time of SVR the patient is given a formal certificate for finishing the treatment course. Future multicenter nationwide studies ultimately will answer many of these queries and help to both better understanding and application of telemedicine.

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