Clinical Surgery Journal

Review Article | Vol 3 Iss S2

Role of Telemedicine Follow-Up Clinic in COVID-19 Crisis

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Received: March 23, 2020; Accepted: May 08, 2020; Published: June 12, 2020

ABSTRACT

Aim is to study the role of telemedicine during COVID-19 crisis. At the time of pandemic when safe distancing practices and staying at home are being practiced it becomes imperative that social distancing is maintained even during clinical practice and doctor-patient interactions in healthcare institutes. A practical method of following this practice would be to adopt the utility of telemedicine practices. This study was conducted in a tertiary care centre in the department of Plastic surgery in the month of March-April 2020 during the time of corona pandemic. This study helped in highlighting the role of telemedicine during pandemic.

KEYWORDS

Telemedicine; COVID-19; Plastic surgery

1. INTRODUCTION

In December 2019 World Health Organization declared COVID-19 (Corona Virus Disease-2019) as a pandemic affecting various countries including India. WHO advised social distancing to prevent spread of disease from health care workers to patients, from one patient to another patient, from patient to attendant, from attendant to attendant. Telemedicine plays an important role in patient healthcare worker interaction transcending physical distant barriers, thus preventing spread of disease. Those patients who have been already treated and having a record in the department can be contacted by telemedicine clinic to give them follow up advice. This study was conducted in the department of plastic surgery during the COVID-19 crisis highlighting the role of telemedicine clinic in providing social distance and preventing spread of disease. In this article we describe our experience regarding use of telemedicine for follow up of our patients during the time of corona pandemic.

2. MATERIALS AND METHODS

This study was done in the department of plastic surgery in a Tertiary Care Institute during the corona pandemic period March-April 2020. Departmental ethical committee approval was taken. Informed consent was taken from the participants, including the healthcare workers and patients. 30 patients and 7 plastic surgery doctors were included in the study. The set-up was made

Citation: Ravi Kumar Chittoria, Role of Telemedicine follow-up clinic in COVID-19 Crisis. Clin Surg J 3(S2): 6-8.

in the department of plastic surgery using smart-phone, desk-top, lap-top using internet connectivity (Figure 1). The patient's were informed telephonically or through press media that they can be called or they can call the healthcare workers to discuss their health problems diagnosed or treated earlier by the doctors (Figure 2).

Figure1: Doctor in Telemedicine Clinic.

Figure 2: Teleconsultation through Telephone.

Figure 3: Teleconsultation through video conferencing.

Telemedicine follow up clinic has assigned telemedicine number to each patient for identification. Doctor already has the patient data and record with him. Telephonically the patients were being called or patients were calling on the number given to them and telephonic doctor-patient interaction was started. Those patients who have internet facilities were allowed to share their records or photographs through e-mail, whatsapp or video conferencing using open web sources such as Skype or zoom etc (Figure 3). Feedback proforma (Table 1) were taken from patient and healthcare workers included in the study.

Question	Patient	Healthcare worker
1. Were you satisfied with the audio quality of the teleconsultation?		
2. Were you satisfied with the video quality of teleconsultation?		
3. (a) Were you satisfied with the doctor-patient interaction regarding your ailment and advice given? (To be answered by patient). (b) Were you satisfied with the doctor-patient interaction regarding the patient follow up and reviewing the symptoms, imparting advice, counseling etc. using telemedicine?(To be answered by the doctor).		
4. Do you find this initiative cost-effective and reducing unnecessary hospital visits?		
5. Do you find it useful in practicing social distancing at the time of COVID-19 Pandemic?		
6. Would you recommend it to be used by other patients/healthcare Institutes?		

Table 1: Feedback Proforma.

3. RESULTS

Feedback proformas showed that the patient and healthcare workers were both satisfied with the interaction.

4. DISCUSSION

WHO defines telemedicine as "The delivery of health care services, where distance is a critical factor, by all health care professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of health care providers, all in the interests of advancing the health of individuals and their communities" [1]. Telemedicine is the death of distance. Telemedicine gains even more importance during special conditions like a global pandemic like COVID-19. Practicing social distancing is the need of hour and telemedicine aids patients in accessing healthcare facilities from remote areas.

A novel corona virus (COVID-19, Corona Virus Disease-2019) which emerged in Wuhan in China in late December [2] is spreading rapidly around the world.

Human corona viruses (HCoVs) represent a major group of corona viruses (CoVs) associated with multiple respiratory diseases of varying severity, including common cold, pneumonia and bronchiolitis [3]. As of March 12, 2020, coronavirus disease 2019 (COVID-19) has been confirmed in 125 048 people worldwide, carrying a mortality of approximately 3·7% [4] compared with a mortality rate of less than 1% from influenza. The best way to prevent and slow down transmission is be well informed about the COVID-19 virus, the disease it causes and how it spreads. The COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes. WHO has proposed social distancing, washing hands with soap and water and using alcohol-based hand rub. Maintaining at least 1 meter distance between oneself and anyone who is coughing or sneezing, avoiding touching eyes, nose and mouth, practicing respiratory hygiene and seeking medical care early in case of fever, cough, difficulty in breathing are some of the measures advised by WHO. Most of the nations worldwide have proposed lockdown. In such situations it becomes difficult for patients to access healthcare and travel to hospitals for routine checkups and follow up visits. Hospital visits in such situations may increase the chances of spread of infection from healthcare workers to patients. Telemedicine plays an important role in such situations enabling patients to access healthcare without direct visits to the hospitals.

Even though telemedicine is no doubt helpful in patient – doctor interaction, but issues with internet connectivity, clarity and quality of audio and video, inability to carry out a proper physical examination etc are some of the shortcomings of the same. Proper patient education and technological access becomes important in imparting healthcare access through telemedicine in this era.

5. CONCLUSION

Telemedicine follow-up clinic is helpful in diseases like COVID-19 in maintaining social distancing and preventing spread of disease. The authors found this useful and recommend other centers to follow the same. Limitations of the study include it is a single center, single department study, large randomized control trials are required to further substantiate the outcome of this study.

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