Special Article

Telemedicine for chronic pain management during COVID-19 pandemic

Address for correspondence:
Prof. Babita Ghai, Department of Anaesthesia and Intensive Care, Post Graduate Institute of Medical Education and Research, Sector 12, Chandigarh - 160 012, India.
E-mail: ghaibabita1@gmail.com

Submitted: 24-May-2020
Revised: 25-May-2020
Accepted: 26-May-2020
Published: 01-Jun-2020

Access this article online
Website: www.ijaweb.org
DOI: 10.4103/ija.IJA_652_20
Quick response code

Babita Ghai, Naveen Malhotra[1], Sukhminder Jit Singh Bajwa[2]

Department of Anaesthesia and Intensive Care, Postgraduate Institute of Medical Education and Research, Chandigarh, [1]Professor Anaesthesiology and In Charge Pain Management Centre, Pt BDS PGIMS, Rohtak, Haryana, [2]Department of Anaesthesiology and Intensive Care, Gian Sagar Medical College and Hospital, Banur, Patiala, Punjab, India

ABSTRACT

Treatment of chronic pain is an essential service. Due to lockdown, travel restrictions, social and physical distancing requirements or fear that health care facilities may be infected; patients may avoid visiting health care facilities in person. It is also imperative to decrease the risk of exposure of the health care workers (HCWs) to severe acute respiratory syndrome corona virus 2 (SARS CoV2) and to ease the overtly burdened health care system. But any disruption in pain practice will have alarming consequences for individuals, society, and whole of health care system and providers. In the current scenario of COVID-19 pandemic, telemedicine is emerging as a key technology for efficient communication and sustainable solution to provide essential health care services and should be considered for chronic pain patients (CPPs). Recently, Board of Governors in supersession of Medical Council of India along with National Institution for Transforming India (NITI Aayog) released "Telemedicine Practice Guidelines" enabling registered medical practitioners to provide healthcare using telemedicine. This article describes the challenges in CPPs during COVID-19 pandemic and the use of telemedicine as the rescue management vehicle for CPPs in current scenario.

Key words: Chronic pain, COVID 19, telemedicine

INTRODUCTION

The COVID-19 pandemic has posed unique challenges and placed exceptional demand on health system.[1] Social distancing is the new norm and travelling is restricted to prevent the spread of the SARS Cov2virus. Ministry of Health and Family Welfare, Government of India on 13th April 2020 came up with the guidance note to *"Enable Delivery of Essential Health Services during the COVID 19 Outbreak in India"* and defined health care services to essential and desirable services.[2]

Essential services include "maternal, new born and child health, prevention and management of communicable diseases, treatment of chronic diseases to avoid complications, and addressing emergencies."[2] Thus, treatment of chronic pain is an essential service and should be properly managed to avoid complications. Chronic pain is the most common reason to seek medical care and ranks among the ten most prevalent diseases worldwide and years lost to disability.[3,4]

Challenges in chronic pain patients during COVID-19 pandemic

As many of the CPPs are elderly with multiple comorbidities, susceptibility to COVID could be higher. There may be potential immune suppression because of complex effect of chronic pain per se. Chronic opioid therapy may lead to opioid induced immune-suppression in some patients.[5] Oral/injectable/interventional steroid therapy may

How to cite this article: Ghai B, Malhotra N, Bajwa SJ. Telemedicine for chronic pain management during COVID-19 pandemic. Indian J Anaesth 2020;64:456-62

induce hypothalamic pituitary axis suppression.[6] Chemotherapy in cancer patients is another factor for immune suppression.

During the lock down state of COVID-19 pandemic all the elective pain consultations and interventional pain procedures were either cancelled or postponed.[7] This has interrupted care of CPPs. Untreated pain may lead to increased pain, decline in quality of life, and increased anxiety and depression in CPPs.[8] Hence, disruption in pain practice will have alarming consequences for individuals, society, and whole of health care system and providers both in short and long term.

CPPs suffer from increased anxiety, stress, and depression compared to general population.[8] Social distancing, isolation, closing of many services (physiotherapy, exercise services, counseling services, support services, etc.) have sprained all the mechanisms many CPPs have been using to control the fatigue and pain, ultimately leading to increased suffering.

Other consequences of the lockdown and isolation could be absent or less physical activity and exercise, change in diet (e.g., increased snacking, consumption of 'comfort' dense calorie foods), etc. Also, absence of domestic workers and help has led to aggravation of problems in geriatric and morbid patients including CPPs. There may be medication shortage due to panic buying. [9]

Telemedicine: A rescue management vehicle

In current scenario of COVID-19 pandemic, telemedicine is emerging as a key technology for efficient communication and sustainable solution to provide essential health care services. Chronic pain management requires frequent visits to the physician for both non-pharmacological and pharmacological advice and adjustment of treatment. Due to lockdown, travel restrictions, social and physical distancing requirements or fear that health care facilities may be infected; patients may avoid visiting health care facilities in person. Telemedicine can help patients to consult physician.

In line with many guidelines, recommendation and best practices for management of CPPs during COVID-19, telemedicine should be considered for CPPs, wherever possible.[10-12] Telemedicine can decrease the risk of exposure of the HCWs to SARS COV2 and can ease the overtly burdened health care system.

Telemedicine: Indian perspective

In India, telemedicine has not been widely used by the Indian physicians for patient interactions. This is because there were no guidelines or legislation on the practice of telemedicine using information and communication technology in India.[13,14] The 2018 judgment of the Hon'ble High Court of Bombay added on the insecurity regarding the legitimacy of telemedicine.[15]

Telemedicine practice guidelines

Given the ongoing COVID-19 crisis, on 25th March 2020, Board of Governors (BoG) in supersession of MCI along with NITI Aayog recognized the need to protect and preserve the functioning and efficiency of the healthcare practitioners and released "Telemedicine Practice Guidelines" as an amendment in the Indian Medical Council (Professional Conduct, Etiquette and Ethics) Regulation, 2002.[16] It is now legal to provide telemedicine consultation and prescription by Registered Medical Practitioners (RMPs) in accordance with the compliance of guidelines.

These guidelines include overarching principles and practical framework. The overarching principles would be common to all future guidelines, whereas practical framework mainly addresses the current scenario of COVID-19 pandemic and may be amended from time to time in the larger public interest with the prior approval of MoHFW.[16-18]

Scope and types of telemedicine

Telemedicine guidelines are formulated for medical practitioners under the Indian Medical Council Act 1956 and should always be used in concurrence with other national guidelines, standard operative procedures, protocols, and policies.[16]

Types of telemedicine

It can be categorized according to:

1. Communication mode used: audio, video, e-mail, fax, etc.
2. Timing of information communicated: Synchronous or asynchronous exchange
3. First or follow-up consultation
    a. First consult: any patient consulting for the first time; or follow-up patient who is consulting after six months since last consultation or who wants to consult for a different health condition or there are new symptoms that are not in the spectrum of the same health condition.

b. Follow-up consult(s): when patient is consulting with same practitioner within 6months of last consultation and the current consultation is for the same health condition.

4. Interaction between the individuals
   a. Patient to RMP
   b. Care giver to RMP caregiver
   c. RMP to RMP
   d. Health worker to RMP.

Salient features

Salient features of these guidelines are provided below; however, readers are strongly suggested to go through the complete guidelines document to get well versed with them.

- Practitioners using telemedicine must maintain the same ethical and professional norms as of traditional face-to-face consult and care with some of the intrinsic limitations of telemedicine
- The guidelines are meant for RMPs who would want to practice telemedicine, under the IMC Act 1956
- All RMPs aiming to provide tele-consultation will have to complete a compulsory online course with 3 years of its notification. In the intervening period, till this online program is developed the principles mentioned in these guidelines need to be followed. Thereafter, undergoing and qualifying such a course, as prescribed, will be essential prior to practice of telemedicine
- The professional decision of a RMP should be the guiding principle for all telemedicine consultations. The RMP as per his/her professional judgment should decide whether a telemedicine consultation is appropriate in a given situation or an in-person consultation is needed in the interest of the patient.

Identification of RMP and patient/caregiver

RMP and patient/caregiver must identify and verify each other ensuring a mechanism/identification. The caregiver identity and authorisation should be checked. The doctor should display his/her registration number. Patient's personal data should not be disclosed or transferred without written consent of the patient.

Mode of Communication: RMP may use any telemedicine tool that is video, audio or text.

Consent: It is implied if the patient initiates the telemedicine consultation. An Explicit patient consent is needed if RMP/HCW/care giver initiates a telemedicine consultation.

Patient evaluation

a. All efforts must be taken by practitioner to collect appropriate and adequate medical information about the patient's health before making any professional decision
b. Patient is responsible for providing the accuracy of information
c. If a physical examination is required for obtaining critical information for consultation, then an in-person consult should be arranged. RMP can arrange examination by another RMP/HCW if necessary
d. Wherever necessary the RMP shall recommend:
   i. Video mode of consultation
   ii. Physical examination by another RMP/HCW next to patient.

RMP shall maintain all patient records as appropriate

Patient management:

RMP can

- Deliver health education appropriate for the patient
- Offer Counseling related to specific clinical condition; and/or
- Prescribe Medicines at professional discretion. Prescribing medicine via tele-consultation entails the same professional accountability as in the traditional in-person consult. Prescribing medicines without an appropriate diagnosis/provisional diagnosis will amount to a professional misconduct.

The categories of medicines that can be prescribed via telemedicine are listed into three categories:

List O: Medicines, which are safe to be prescribed and are often available 'over the counter,' such as paracetamol, oral rehydration solutions, cough lozenges, etc. This list includes medicines deemed necessary during public health emergencies.

List A: Medicines, which are relatively safe with low potential for abuse, which can be prescribed during the first consult which is a video consultation and are being prescribed for re-fill, in follow-up consult.

List B: Medicines, which RMP can prescribe in a patient who is undergoing follow-up consultation in

addition to those, which have been prescribed during in-person, consult for the same medical condition.

Prohibited List: Includes medicines that connect cannot be prescribed via tele-consultation. Medicines listed in Schedule X of Drug and Cosmetic Act and Rules or any Narcotic and Psychotropic substance listed in the Narcotic Drugs and Psychotropic Substances, Act, 1985

RMP would be required to fully abide by Indian Medical Council (Professional conduct, Etiquette and Ethics) Regulations, 2002 and with the relevant provisions of the IT Act

Misconduct: The add-ons to general requirement under MCI act are those that are not permissible specifically to telemedicine

I. RMPs insisting on telemedicine, when the patient is willing to travel to a facility and/or requests an in-person consultation
II. RMPs misusing patient images and data, especially private and sensitive in nature (e.g., RMP uploads an explicit picture of patient on social media, etc.)
III. RMPs who use telemedicine to prescribe medicines from the specific restricted list
IV. RMPs are not permitted to solicit patients for telemedicine through any advertisements or inducements
V. Penalties: As per IMC Act, ethics and other prevailing laws.

RMPs will not be held responsible for breach of confidentiality if there is a reasonable evidence to believe that patient's privacy and confidentiality has been compromised by a technology breach or by a person other than RMP. The same fees will be charged for a telemedicine consultation as for an in-person consultation using either an online payment apps or Internet banking. Consultation between patient and RMP through a caregiver is permitted. For the purpose of these guidelines "Caregiver" could be a family member, or any person authorized by the patient to represent the patient. This will be relevant in Indian rural scenario where patient may be uneducated or may not be versed with mode of communication.

Consultation between RMP and HCW or another RMP is permitted. For the purpose of these guidelines, "Health worker" could be a Nurse, Allied Health Professional, Mid- Level Health Practitioner, Auxiliary Nurse Midwives (ANM)or any other health worker designated.

Right to stop consultation: Both the patient and the doctor have the right to discontinue the tele-consultation at any stage. Artificial intelligence/machine learning are not allowed to counsel the patients or prescribe any medicines

Advantages of telemedicine

Telemedicine services (TMSs) offer numerous advantages especially in routine/non-urgent care. Unnecessary and avoidable exposure of the people involved in delivery of healthcare can be prevented. TMSs reduce the need of personal protective equipment leading to reduction in resource consumption. TMSs improve access to health care and reduce resource use across the already stressed healthcare infrastructure during current pandemic. This all can provide substantial economic savings at all levels.[19,20]

Limitations of telemedicine

There is lack of clarity on medico legal implications. Use of technology cannot replace clinical medicine based on in-person consultation and physical examination. Also chances of misdiagnosis and inability to conduct radiological investigations for diagnosis are other limitations

TELEMEDICINE SERVICES (TMSS)

Chronic pain management: Evidence

Full-scale use of telemedicine in chronic pain is rare. Use of telemedicine in chronic pain is usually focused on psychological interventions, exercise, mindfulness-based stress reduction therapies, etc. Various systematic reviews in adults report reduction in pain, disability, depression, and anxiety in intervention groups compared to control groups (usual care or waitlisted).[21-24] On the contrary, psychological therapies delivered via internet or mobile applications have reported only small beneficial effect in children and adolescent with mixed chronic pain.[25]

Limitation of evidence

Although, according to evidence the beneficial effects of telemedicine are promising, substantial uncertainty remains around many aspects of studies related to telemedicine. These include small sample size, small effect size, methodological flaws, long-term evaluation, adverse events, etc.[26] Moreover, the satisfaction and

acceptability needs to be explored. Also, there are relatively few studies assessed for harm and dropouts. Research on telemedicine and chronic pain from India is sparse and data is weak.[27]

Practical considerations of telemedicine in chronic pain patients

The practical considerations which a RMP should take into account for chronic pain management using telemedicine are:

There are some requirements on patients' side for successful teleconsultation, absence of which leads to failure of the ssystem. These include apps/ videoconference programs installed on the patient's phone/ tab/home computer with a high speed internet connection, a properly charged mobile phone, laptop or computer, paper and pen to make notes, apps to record symptoms on a daily basis and focusing on health needs rather than unnecessary jargon during the video–consult.

General rules related to telemedicine as mentioned above should be followed. Chronic pain management relies on good clinical history and clinical assessment of patient-reported outcome measures (PROMs).This assessment can be undertaken remotely using electronic versions of PROMs using various questionnaires and scales. The reliability and validity of various electronic pain questionnaires such as Short Form McGill Pain Questionnaires (SF-MPQ), Pain Disability Index has been proven with significantly more patients reporting electronic versions easier and preferred.[28] Similarly, many questionnaires for assessment of patients with chronic low back pain have shown good reliability and moderate validity.[29]Pain is also accompanied by anxiety and depression and sleep problems. Hence, anxiety, depression, and sleep questionnaires can also be electronically administered. Thus, a detailed pain history and major part of pain assessment using PROMs can be done using telemedicine in CPPs. Most of the red flag signs in chronic pain can be picked up at history, thus favoring telemedicine practice in chronic pain.

Physical examination forms the corner stone of chronic pain management. Thorough physical examination is essential to know the source of pain: the pain generator. Many a times, it is missed leading to inadequate management of chronic pain. Regarding physical examination patient should be made to understand that complete physical examination cannot be performed and short of that clinical assessment is not as complete as in face-to-face consultation. Hence, the first consultation should be preferably a physical consultation.

Non-pharmacological advice

An important aspect of chronic pain management is non-pharmacological advice, such as education about ergonomics, physical activity, exercise, good posture, life style modification, counseling and coping skills, etc. All these components can be easily imparted using telemedicine.

Prescription of medications

Many drugs prescribed for CPPs fall in the category of prohibited drugs for tele-consultation. Suitable waivers for CPPs will have to be obtained from competent authorities soon.

Challenges of telemedicine with Indian perspective especially in Government Set Up

Setting up infrastructure

At present, in India many government institutes either do not have telemedicine units or have one or two telemedicine units. The infrastructure will have to be initiated or expanded to start official tele-consultation for all specialties including pain clinic OPD.

Separate OPD hours/sessions/days

For tele-consultation, separate OPD hours / sessions have to be allotted. In a busy pain clinic OPD, it is difficult to do tele-consultation when regular pain clinic OPD is going on. The staff has to be trained which is accustomed to in-person working.

Free distribution of medicines

In some institutes free medicines (15-30 days) are given to the patients by the institutes/authorities. In tele-consultation, the patient will have to send somebody to receive the medicines.

Patients with rural background

Many patients with rural back ground visit pain clinics in government set up. Tele-consultation in patients with rural background may not be practical due to issues pertaining to education, network, etc. However, with the availability of smart phones, even these people could access healthcare with simple-to-use WhatsApp or Face Time (available on phones) services.

Also, provision of video conferencing between patient, attendants, pain physician, psychiatrist,

pharmacologist, physiotherapist in complicated cases may be required.

CONCLUSION

The risk of COVID -19 will extend well beyond the current period and may last longer. Therefore, in future even if lockdown is relaxed, TMSs will be attempted by almost all the health care facilities and these will be novel for many. Universal electronic communication technology is relatively inexpensive to access and will avoid risk of virus spread. Treatment options such as health education and psychologically oriented self-management are potentially helpful for managing pain and can be easily delivered using TMSs. Changing practice in current era of COVID pandemic may have positive, negative, or unforeseen consequences. When we come to redesign health services after the pandemic, may be the telemedicine would make as another model of care with patients with chronic pain.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

REFERENCES

1. Chen N, Zhou M, Dong X, Qu J, Gong F, Han Y, *et al*. Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: A descriptive study. Lancet 2020;395:507-13.
2. Enabling delivery of essential health services during the COVID 19 Outbreak: Guidance note. Available fom: https://www.mohfw.gov.in/pdf/EssentialservicesduringCOVID19 updated 0411201.pdf. [Last accessed on 2020 May 13].
3. Global, regional, and national disability-adjusted life years (DALYs) for 359 diseases and injuries and healthy life expectancy (HALE) for 195 countries and territories, 1990-2017: A systematic analysis for the Global Burden of Disease Study 2017. Lancet 2018;392:1859-922.
4. Ganesan S, Acharya AS, Chauhan R, Acharya S. Prevalence and risk factors for low back pain in 1,355 young adults: A cross-sectional study. Asian Spine J 2017;11:610-7.
5. Page GG. The immune-suppressive effects of pain. Madame Curie Bioscience Database [Internet]. Available from: https://www.ncbi.nlm.nih.gov/books/NBK6140/. [Last accessed on 2020 Apr 26].
6. Abdul AJ, Ghai B, Bansal D. Hypothalamic pituitary adrenocortical axis suppression following a single epidural injection of methylprednisolone acetate. Pain Physician 2017;20:E991-1001.
7. Malhotra N, Joshi M, Datta R, BajwaSJ, Mehdiratta L. Indian Society of Anaesthesiologists (ISA National) Advisory and Position Statement regarding COVID19. Indian J Anaesth 2020;64:25963.
8. Sarzi-Puttini P, Vellucci R, Zuccaro SM. The appropriate treatment of chronic pain.Clin Drug Investig 2012;32:21-33.
9. Eccleston C, Blyth FM, Dear BF, Fisher EA, Keefe FJ, Lynch ME, *et al*. Managing patients with chronic pain during the COVID-19 outbreak: Considerations for the rapid introduction of remotely supported (eHealth) pain management services. Pain 2020;161:889-93
10. Available from: http://www.euro.who.int/__data/assets/pdf_file/0007/436354/strengthening-health-systems-response-COVID-19-technical-guidance-1.pdf. [Last accessed on 2020Apr 26].
11. Shanthanna H, Strand NH, Provenzano DA, Lobo CA, Eldabe S, Bhatia A, *et al*. Caring for patients with pain during the COVID-19 pandemic: Consensus recommendations from an international expert panel. Anaesthesia 2020. doi: 10.1111/anae.15076.
12. Cohen SP, Baber ZB, Buvanendran A, McLean LTCBC, Chen Y, HootenWM, *et al*.Pain management best practices from multispecialty organizations during the COVID-19 pandemic and public health crises. Pain Med 2020 Apr 7:pnaa127. doi: 10.1093/pm/pnaa12.
13. Mishra S, Kapoor L, Singh I. Telemedicine in India: Current scenario and the future. Telemed J E Health 2009;15:568-75.
14. ICMR Project [Internet]. Dos.iitm.ac.in. 2018. Available from: http://dos.iitm.ac.in/projects/icmr/. [Last accessed on 2020 Apr 26].
15. Available from: https://www.biovoicenews.com/attack-on-tele-consultation-for-primary-health-a-backward-step-iamai/. [Last accessed on 2020 Apr 29].
16. Telemedicine Practice Guidelines. Available from: https://www.mohfw.gov.in/pdf/Telemedicine.pdf. [Last accessed on 2020 Apr 26].
17. WHO. A health telematics policy in support of WHO'shealth-for-all strategy for global health development: Report of the WHO group consultation on health telematics, 11–16 December, Geneva, 1997. Geneva: World Health Organization;1998.
18. Telemedicine-opportunities and developments in member states [Internet] 2nd ed. Geneva, Switzerland: WHO press; 2010. Available from: https://www.who.int/goe/publications/goe_telemedicine_2010.pdf.
19. Chauhan V, Galwankar S, Arquilla B, Garg M, Somma SD, El-Menyar A, *et al*. Novel coronavirus (COVID-19): Leveraging telemedicine to optimize care while minimizing exposures and viral transmission. J Emerg Trauma Shock 2020;13:20-4.
20. Ayyagari A, Bhargava A, Agarwal R, Mishra SK, Mishra AK, Das SR, *et al*. Use of telemedicine in evading cholera outbreak in MahakumbhMela, Prayag, UP, India: An encouraging experience. Telemed J E Health 2003;9:89-94.
21. Eccleston C, Fisher E, Brown R, Craig L, Duggan GB, Rosser BA, *et al*. Psychological therapies (internet-delivered) for the management of chronic pain in adults. Cochrane Database of Syst Rev 2014;CD010152.doi: 10.1002/14651858.CD010152.pub2.
22. Buhrman M, Gordh T, Andersson G. Internet interventions for chronic pain including headache: A systematic review. Internet Interv2016;l4:17-34
23. Sundararaman LV, Edwards RR, Ross EL, Jamison RN. Integration of mobile health technology in the treatment of chronic pain: A critical review. RegAnesth Pain Med 2017;42:488-98.
24. Slattery BW, Haugh S, O'Connor L, Francis K, Dwyer CP, O'Higgins S, *et al*.An evaluation of the effectiveness of the modalities used to deliver electronic health interventions for chronic pain: Systematic review with network meta-analysis. J Med Internet Res 2019;17:e1108.
25. Fisher E, Law E, Dudeney J, Eccleston C, Palermo TM. Psychological therapies (remotely delivered) for the management of chronic and recurrent pain in children and adolescents. Cochrane Database Syst Rev 2019;4:CD011118.
26. Mathersul DC, Mahoney LA, BayleyPJ. Tele-yoga for chronic pain: Current status and future directions. Glob Adv Health Med 2018;7:2164956118766011.doi: 10.1177/2164956118766011.
27. Chhabra HS, Sharma S, Verma S. Smartphone app in self-management of chronic low back pain: A randomized controlled trial. Eur Spine J 2018;27:2862-74.

28. Cook AJ, Roberts DA, Henderson MD, Van Winkle LC, Chastain DC, Hamill-Ruth RJ. Electronic pain questionnaires: A randomized, crossover comparison with paper questionnaires for chronic pain assessment. Pain 2004;110:310-7.

29. Azevedo BR, Oliveira CB, AraujoGMD, Silva FG, Damato TM, Pinto RZ, *et al.* Is there equivalence between the electronic and paper version of the questionnaires for assessment of patients with chronic low back pain? Spine 2020;45:E329-35.