# Journal of Vessels and Circulation

### 12<sup>th</sup> Iranian Congress of Stroke December 2020

## **Telerehabilitation for Stroke Patients**

Mahboobeh Kolahdoz<sup>1</sup>, Dorsa Hamedi<sup>2</sup>, Sepideh RahimiZadeh<sup>1</sup>, Bahar Naghibi<sup>1</sup>

<sup>1</sup> Student Research Committee, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

<sup>2</sup> Department of Occupational therapy, Faculty of Rehabilitation Sciences, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

#### Article Info

Article type: Review article

#### Article History:

Received: 20 January 2020 Revised: 04 March 2020 Accepted: 14 May 2020

#### Keywords:

Telemedicine Telerehabilitation Stroke

#### ABSTRACT

Background and Aim: Increasing rates of disability, cost of rehabilitation services, lack of sufficient human resources, and transportation problems for people with disability are among the health problems in the world. Technology development has been able to overcome some of the problems in providing health care services clients. Telemedicine services using communication and electronic to intermediaries, improve the patients' health. Telerehabilitation is a part of telemedicine interventions. In telerehabilitation, clients are far away from rehabilitation centers, and rehabilitation services are provided through communication mediums using the Internet and other technologies. Rehabilitation is an essential part of treatment for stroke patients. Gait and walking problems, caregivers' conditions, geographic distance from rehabilitation centers, and transportation costs are barriers that limit access to rehabilitation services for stroke patients. Telerehabilitation can alleviate some of these problems and provide justice access to rehabilitation services for these clients. The purpose of this study was to evaluate the available scientific evidence on the effectiveness of telerehabilitation for stroke patients.

**Materials and Methods:** In this review study, articles on PubMed, ScienceDirect and Google scholar databases were reviewed. Telerehabilitation and stroke were used as search keywords. The search interval was 10 years from 2010 to 2020.

**Results:** A total of 60 studies were reviewed by selected characteristics. Telerehabilitation can be used in order to improve activities of daily living, self-care, upper extremity function, gait and functional mobility training, cognitive rehabilitation, caregiver training, general health promotion, social participation, and quality of life for chronic stroke patients. Telecommunication devices such as mobile applications, virtual reality, and computer software can be used for home based telerehabilitation.

**Conclusion:** Telerehabilitation can be used alongside with clinical rehabilitation services for stroke patients. The cost-effectiveness of telerehabilitation interventions for stroke patients has not yet been established.