



이름: 박성윤/SUNG YUN PARK

직위: 부교수/Associate Professor

소속: 동국대학교 한의과대학 진단학교실 /Department of Diagnostic, College of Korean medicine, Dongguk University

기타소속: 동국대학교 일산병원 개방형실험실 구축사업단 부단장/
Dongguk University Ilsan-Hospital Hospital-based
Business Innovation Center

강연제목: A-mode 와 B-mode 초음파를 활용한 근육의 질 평가 연구/ A study on muscle quality evaluation using A-mode and B-mode ultrasound

Abstract:

The aim of this study is to analyze the signal characteristics of the 5MHz for A-mode. In this study, the signal characteristics of the transducer used in the A-mode ultrasonography device are based on the commercial B-mode ultrasonography diagnostic device for the development of a device that can easily measure the thickness of muscle and fat of the human body using the A-mode ultrasonography device. The protocol of this study was approved by Dongguk University Isan Oriental medicine Hospital (IRB No. 2021-08-005-004). The sonographer also had six years of experience in the diagnostics of skeletal muscle field using ultrasound equipment. A total of 20 subjects participated in this study. The subjects performed the Shrug exercise for 10 minutes for trapezius strengthening training. The thickness of muscle and fat was measured by acquiring trapezius images before and after exercise using B-mode ultrasonography. The signal of the trapezius muscle was measured using A-mode ultrasonography, and the muscle and fat thickness were calculated by comparing the muscle and fat boundary with the B-mode ultrasonography data after removing the noise of the ultrasound signal. There was no significant difference in muscle and fat thickness between A-mode ultrasonography and B-mode ultrasonography ($p=0.00$). This study confirmed the characteristics of the ultrasonic terminal with a center frequency of 5 MHz to measure the thickness of muscle and fat. Based on the results of this study in the future, it will be of great help to develop A-mode ultrasonography measuring equipment.

Brief Biosketch

대한한의원진단학회 정보통신이사/ Director of Information and Communication, The Society of Korean Medicine of Diagnostics