

Modernization of Listening Examination in Chinese Medicine
--Voice Analysis of Blood Stasis Patients

Lee Ke-Cheng

Institute of Chinese Medical Sciences, China Medical College

ABSTRACT

Blood stasis is a common syndrome to Traditional Chinese Medicine. Due to the aging tendency of our population and the changing disease spectrum to dominant chronic diseases, the research and clinical application of blood stasis is growingly important.

We collected the voice samples of 65 patients with blood stasis and 32 patients who without, five parameters (zero-crossing average number A1, variation of peaks and valleys A2, variation of formants A3, high and low frequency spectral energy ratio A4 and A5) were used to analyze the difference between groups.

The results revealed that we can distinguish blood stasis and non-blood stasis by A1 and A2 with 68.5% correct rate. There were no significant differences between light and heavy blood stasis groups.

In A1, both light and heavy blood stasis groups are smaller than non-blood stasis group ($p < 0.05$); no significant difference between male light blood stasis group and non-blood stasis group, but heavy blood stasis group did with $p < 0.05$; both female light and heavy blood stasis groups ($p < 0.05$).

In A2, both light and heavy blood stasis groups are larger than non-blood stasis group ($p < 0.05$); no significant difference between male light blood stasis group and non-blood stasis group, but heavy blood stasis group did with $p < 0.05$; both female light and heavy blood stasis groups are larger than non-blood stasis group ($p < 0.05$).

Key words: Blood Stasis , Auscultation , Voice Analysis

