arteries such as height (h1, h2, h3, h4, h5), time (t1, t2, t3, t4, t5), AW, AW rate, total area of pulse (At) and augmentation index (AIx).

**Results:** As a result of the analyzing parameters according to age, h2, h3, AS (systolic area rate to AT), AIx and AW were increased but t2/t, t3/t, t5/t and AD (diastolic area rate to AT) were decreased.

**Conclusions:** We checked the blood-vessel conditions for a normotensive group according to age and confirmed various parameters. Also, we found that the AW was analogous to the AIx that has been used for diagnosing arteriosclerosis. Furthermore, compared with the Aix, we confirmed the usefulness of the AW as a new parameter for checking blood-vessel condition and characteristics.

**Key Words:** pulse waveform; 5-level pressure; arteriosclerosis; augmentation index (AIx); W area of pulse (Aw)

## (3) Korean Journal of Acupuncture, Vol.28, No.4, pp.91~99, 2011

# Comparative Studies on the Concordance Rate of Pulse Condition Interpretation between Interpreters and between Interpreters and a Pulse Analyzer

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## Abstract

**Objectives:** The purpose of our investigation was to determine the concordance rate among interpreters. Furthermore, we determined the concordance rate between individual interpreters and the pulse analyzer used in this study.

**Methods:** Thirty-nine volunteers were enrolled for this study. As instructed by the protocol, these subjects took a 5-minute rest in a sitting position. As they were not allowed to move or speak, radial artery pulse conditions were measured on the lower arm of each subject by means of the pulse analyzer under investigation. Two Korean medical doctors, who did not know the default pulse conditions, were instructed to intuitively choose the best condition one in comparison with the 13 default pulse conditions. Subsequently, we analyzed the differences in results between interpreters and between interpreters and the pulse analyzer.

**Results:** The total concordance rates, with similar concordance rates being included, between interpreters, between interpreter A and the pulse analyzer, and between interpreter B and the pulse analyzer was 56.4%, 79.5%, and 71.8% respectively. Interpreter A and B selected 6 and 7 cases of a faint, fine, weak (微細弱脈) pulse, agreeing with each other in 5 of the cases and with the pulse analyzer in 8 of the 13 cases.

**Conclusions:** In the case of a skipping pulse 2 (促2脈), a short pulse (短脈), and a faint · fine · weak pulse (微細弱脈), the concordance between interpreters matches with the concordance between interpreters and the pulse analyzer. The concordance rate goes is higher for such smaller pulse conditions as faint · fine · weak pulse (微細弱脈) and short pulse (短脈).

**Key Words:** pulse analyser; pulse condition; faint · fine · weak pulse (微細弱脈); skipping pulse 2 (促2脈); short pulse (短脈)

## (4) Journal of Pharmacopuncture, Vol.14, No.1, pp.7~11, 2012

# Effect of Egg White Combined with Chalcanthite on Lipopolysaccharide induced Inflammatory Cytokine Expression in RAW 264.7 cells

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## Abstract

**Aim:** Historically, mineral compound herbal medicines have long been used in treatments of immune-related diseases in Korea, China and other Asian countries. In this study, we investigated the anti-inflammatory effect of egg white combined with chalcanthite (IS4) on lipopolysaccharide (LPS)-stimulated RAW 264.7 cells.

**Methods:** RAW 264.7 cells cultured with LPS and various concentrations of IS4 were analyzed to determine the production of pro-inflammatory cytokines and mediators by using enzyme-linked immune sorbent assays (ELISAs).

**Results:** IS4 concentration inhibited the production of interleukin-1beta (IL-1$\beta$), interleukin-6 (IL-6), and granulocyte-macrophage colony-stimulating factor (GM-CSF) induced by LPS. IS4 at high concentrations (25 and 50'μg/ml) inhibited, in concentration-dependent manner, the expression of tumor necrosis factor-alpha (TNF—'$\alpha$) stimulated by LPS.

**Conclusion:** IS4 has shown an anti-inflammatory effect in RAW 264.7 cells.

**Key Words:** cytokine; GM-CSF; IL-1$\beta$; IL-6; lipopolysaccharide; TNF—$\alpha$