

## Circulating Soluble Corin: A New Biomarker or Risk Factor for Age-Related Disorders

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### Case Report

Natriuretic peptides have been associated with age-related disorders including cardiovascular disease and its metabolic risk factors such as hypertension, diabetes, obesity, and dyslipidemia [1]. Recently, human corin, a type II transmembrane serine protease highly expressed in the heart [2], was found to play a physiological role in activation of natriuretic peptides [3,4]. As a physiological activator of natriuretic peptides, corin might be associated with age-related disorders. Recently, it was found that corin can be shed from the cardiomyocyte surface by metalloproteinase-mediated hydrolysis and corin autocleavage [5]. Apparently, shed corin molecules could enter the circulation. Soluble corin in the circulation is detectable [6] and was reported to have the same activity as the membrane-bound corin [7]. If so, circulating soluble corin is speculated to be associated with age-related disorders. Circulating corin could be measured by enzyme-linked immunosorbent (ELISA) assays [6,8-10]. To date, some small sampled case-control studies have examined circulating soluble corin and found that corin in the circulation was decreased in osteoporosis [11], acute coronary syndrome [12], and heart failure [12] but increased in pregnant hypertension [13]. In addition, we previously found a significant and positive association of serum soluble corin with hypertension [14], obesity [15], hyperglycemia, and dyslipidemia (unpublished data) in a population of China. All these findings suggested that circulating soluble corin may be a biomarker or a risk factor for age-related disorders. Further research into the relationship between age-related disorders and circulating soluble corin is warranted.

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