A Study of the Arterial Stiffness Index in Diabetes Patients:  
Trial of a New Non-Invasive Arterial Hardness Estimation Procedure that Uses an Oscillometric Method

Third Department of Internal Medicine, Tokyo Medical University School of Medicine1,  
Kyorin University School of Health Sciences2, Department of General Medicine, Kyorin University School of Medicine3, Tokyo Metropolitan Toshima Hospital, Department of Internal Medicine4, National Public Service personnel mutual Aid Associations Federation Tachikawa Hospital, Health Medicine Center5  

Kazuhiro Hiramine1, Takashi Miwa1, Keiichiro Harashima2, Toshiaki Takeichi3, Naoko Iwahashi1,  
Rie Kubota4, Rokou Ito4, Masao Kanazawa1, Yoko Notoya1, Hideaki Sato5, Hideaki Shimazu2,  
Juinchi Hayashi3, Toru Hayashi1

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Introduction:  
The CardioVision Model MS-2000 (distributed by IMDP Corporation USA) system applies the oscillometric method to measure arterial stiffness, which is quantified by the Arterial Stiffness Index (ASI). Using this device, we compared arterial stiffness in diabetes and non-diabetes patients.

Subjects and Method:  
202 outpatients with Type 2 diabetes participated in this study. 54 regular medical checkup patients participated as a control group. ASI measurement was conducted with the subject in a sitting position and rested state and was repeated for each subject 3 to 5 times.

Result:  
The diabetes patients’ ASI of 104 was significantly higher than the non-diabetes patients’ ASI of 41. A strong correlation with age, blood pressure, and BMI was also noted. When we categorized diabetes subjects by general danger factors, those patients who also had high blood pressure demonstrated a prominent increased ASI score.

Observations:  
Diabetes patients demonstrated significantly increased arterial stiffness. As data accumulates, we expect that the ASI system will emerge as a new non-invasive standard for measuring arterial stiffness.
健常者と糖尿病患者のASI

English

① Normal/healthy subjects and diabetes patients' ASI

② Normal/ healthy subjects

③ Diabetes patient
① 健常者と糖尿病患者のASI

② Normal/healthy subjects and diabetes patients' ASI

② Normal/ healthy subjects
### English

1. **Index for each ASI normal group/abnormal group**

2. **ASI normal group**

3. **ASI abnormal group**

4. **Systolic blood pressure**

5. **Diastolic blood pressure**

6. **Number of years for which disease has been contracted**
English

① Correlation between ASI and each clinical index

② Blood sugar

③ Systolic blood pressure

④ Diastolic blood pressure

⑤ Data for all measurement recipients
ASIと各臨床指標の相関

○ 1 Correlation between ASI and each clinical index
○ 2 Blood sugar
○ 3 Systolic blood pressure
○ 4 Diastolic blood pressure
○ 5 The data for DM patients used (in this study)