

Department of Internal Medicine

Division of General Medicine

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Research Activities

Division of General Medicine, The Jikei University Hospital

The objective of this study was to examine the use and effects of medical health care information among patients who had first visited our outpatient clinic. We used a questionnaire created for this cross-sectional study.

About 40% of the outpatients visited our clinic with medical health care information. Half of the information came from the Internet or from acquaintances. Little information came from newspapers or TV programs. All study participants who used the Internet had obtained information about diseases and symptoms, and half of them had obtained information about medical institutions. All study participants who had information from acquaintances had obtained information about diseases, symptoms, and medical institutions. These tendencies did not differ significantly with sex or age.

Division of General Medicine, The Jikei University Aoto Hospital

The effects of *shinrin-yoku* (forest-air bathing and walking) were investigated in patients with essential hypertension. Basic research on heart failure was performed in collaboration with a group from Essen University in Germany.

Division of General Medicine, The Jikei University Daisan Hospital

1. Study of factors of infection in elderly inpatients

To investigate the relation between infection and several factors in elderly inpatients, we studied the relations of infection with the nutritional state, administered drugs, and biochemical markers. We found that a poor nutritional state and the use of gastric acid-suppressing drugs promote infection in elderly inpatients.

2. Study of fever of unknown origin

We attempted to clarify the cause of fever of unknown origin by measuring white blood cells, the erythrocyte sedimentation rate, and levels of C-reactive protein, adenosine deaminase, 2-5 oligoadenylate synthetase, soluble interleukin-2 receptor, and procalcitonin. We found that viral infection can be distinguished from bacterial infection on the basis of the results of these measurements. Procalcitonin is useful for the diagnosis of sepsis due to gram-negative rods.

Division of General Medicine, The Jikei University Kashiwa Hospital

Our research works consist of 2 parts: the first is to investigate the role of general medicine on environmental health achievement in rural areas, especially in Kashiwa City, and the second is to evaluate lipid abnormalities that result in premature atherosclerosis and to determine therapeutic measures for atherosclerotic disorders.

1. Investigation of the role of general medicine on environmental health achievement

We developed a new regional nutritional education system for subjects with diabetes mellitus or metabolic syndrome in the Kashiwa area using grants from the Kao Research Council for the Study of Healthcare Science in 2008 and from the Chiba Foundation for Health Promotion & Disease Prevention in 2010. As a committee member of local governance, we also helped develop a local health care system in the Kashiwa area.

2. Studies of lipid metabolism and atherosclerosis

1) We studied the effects of carbohydrate co-feeding on postprandial hyperlipidemia by measuring serum levels of apolipoprotein B-48.

2) We performed an incubation study using bacteriophages to examine the antiviral effects of plasma fractions.

3) With our newly developed method of high-performance liquid chromatography (reported in *Clinical Biochemistry* in 2007 and in *Lipids in Health and Disease* in 2008), we established a method for the measurement of lipoprotein A (reported in the *Journal of Lipid Research* in 2009).

4) The clinical significance of malondialdehyde-modified low-density lipoprotein, a clinical measurement of serum oxidized low-density lipoprotein, was assessed.

5) Effects of astaxanthin on triglyceride, high-density lipoprotein, and adiponectin were investigated, and the results were reported at the annual scientific meeting of the Japanese Society of Clinical Nutrition.

Publications

Yanai H, Furutani N, Ito K, Yoshida H, Tada N. Scientigraphic findings and serum matrix metalloproteinase 3 and vascular endothelial growth factor levels in patients with polymyalgia rheumatica. *Open Gener Inter Med J* 2009; **3**: 53-7.

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Reviews and Books

Tada N, Yoshida H, Yanai H, Ito K, Noriko S, Tomono Y, Koikeda T. Effects of astaxanthin administration on serum lipids in hyperlipidemic man: a randomized, placebo-controlled study. In: Lewis BS, Widimsky P, Flugelman MY, Halon D, editors. *New Approaches in Coronary Artery Disease*. Proceedings of the 8th International Congress on Coronary Artery Disease; 2009. p. 543-6.