

The Necessity of Collaboration With Doctors Involved in Annual Medical Checkups in the Identification of Familial Hypercholesterolemia in Japan

Eiichi Kakehi^a, Kazuhiko Kotani^{b, c}

To the Editor

Patients with familial hypercholesterolemia (FH), a common genetic disorder, show high blood levels of low-density lipoprotein (LDL) and earlier treatment prevents coronary heart disease; thus, the relevance of the identification of FH to its prevention is emphasized [1]. As the low rate of its diagnosis is an issue in many countries around the world, including Japan [2, 3], systems to identify FH are therefore needed. The primary care settings, as the department of general medicine/practice where patients firstly consult in relation to various health problems, including asymptomatic individuals with abnormal laboratory data, would play an important role in the identification of FH [4]. In the primary care setting, annual medical checkups (community-based mass examination, special health checkups, human dock [5]) also seem to be a potential opportunity to suspect FH.

We surveyed the reasons for the first visit of patients who were consecutively recruited at the general medicine department in our hospital in the years 2015 and 2019, using the International Classification of Primary Care (ICPC) criteria. The ICPC-2 is used internationally to classify chief complaints of patients in the primary care setting [6]. The study was approved by the institutional ethics committee (No. 2020-018). As a result, among the chief complaints of patients on their first visit ($n = 3,491$ in 2015 and $n = 2,640$ in 2019), the prevalence of “abnormal laboratory data” was 13.9% ($n = 486$) in 2015 and 8.6% ($n = 223$) in 2019, respectively. “Abnormal laboratory data” was the most common chief complaint in both years. Regarding the details of abnormal laboratory data, the prevalence of “dyslipidemias” was 17.7% in 2015 and 40.5%

in 2019, respectively (Table 1). Among the types of dyslipidemias, the prevalence of LDL-cholesterol levels of ≥ 180 mg/dL [1] was 23.3% in 2015 and 41.3% in 2019. The prevalence of LDL-cholesterol levels of ≥ 200 mg/dL was 7.0% in 2015 and 15.2% in 2019. Almost all the patients were introduced to our hospital by doctors involved in annual medical checkups, where FH was not strongly suggested in such cases at the time of introduction. We could consider FH based on the clinical background and administered statins in cases (three cases in 2015 and 11 cases in 2019) with LDL-cholesterol levels of ≥ 180 mg/dL.

In Japan, annual medical checkups are popularly conducted and can be a possible chance to identify FH from our survey. However, when FH is asymptomatic and/or at a relatively early stage as well as FH is not suggested in the checkups, the patients may not visit hospitals. Since Japan’s medical care system has specific features, such as free access to doctors at the first visit, not only general practitioners but also specialists (i.e., ophthalmologists, dermatologists, plastic surgeons, orthopedic surgeons, etc.) are required to be enlightened about the identification of FH [4]. Systems of consultation, in which general practitioners and specialists with little experience and knowledge in FH-related areas can collaborate with specialists in FH, are also necessary [4]. Additionally, from our survey, collaboration with doctors involved in annual medical checkups should be reinforced, for instance by more education on FH and feedback on the diagnosis of FH to such doctors.

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Conflict of Interest

None to declare.

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^aDepartment of General Medicine, Tottori Municipal Hospital, Tottori City, Japan

^bDivision of Community and Family Medicine, Jichi Medical University, Shimotsuke City, Japan

^cCorresponding Author: Kazuhiko Kotani, Division of Community and Family Medicine, Jichi Medical University, 3311-1 Yakushiji, Shimotsuke City, Tochigi 329-0498, Japan. Email: kazukotani@jichi.ac.jp

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Table 1. The Prevalence of Dyslipidemias as the Reason for the First Visit for “Abnormal Laboratory Data”

Abnormal laboratory data	2015 (n = 486)	2019 (n = 227)
Dyslipidemias	86/486 (17.7%)	92/227 (40.5%)
High levels of total cholesterol	67/86 (77.9%)	80/92 (87.0%)
High levels of LDL-cholesterol (≥ 140 mg/dL)	63/86 (73.3%)	84/92 (91.3%)
LDL-cholesterol of ≥ 180 mg/dL	20/86 (23.3%)	38/92 (41.3%)
LDL-cholesterol of ≥ 200 mg/dL	6/86 (7.0%)	14/92 (15.2%)
High levels of triglycerides (≥ 150 mg/dL)	26/86 (30.2%)	34/92 (37.0%)
Low levels of HDL-cholesterol (< 40 mg/dL)	4/86 (4.7%)	13/92 (14.1%)

LDL: low-density lipoprotein; HDL: high-density lipoprotein.

Informed Consent

The study was approved in an opt-out consent manner.

Author Contributions

KK designed the study. EK and KK wrote the article. EK prepared data. All authors approved the manuscript for submission.

Data Availability

The data of this study are available on request from the corresponding author depending on the conditions.

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