

Note

Educational Program for General Physicians to Promote Early Diagnosis and Initiation of Treatment of Human Immunodeficiency Virus Infection

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Background : Early-stage human immunodeficiency virus (HIV) infection is often missed, primarily because the symptoms are non-specific, and treatment is therefore delayed. To address this, we developed an educational program for general physicians to better understand the likely presentations and the importance of confirming early-stage HIV infection.

Methods : Special sessions were organized twice at the Japanese Society of Hospital General Medicine conference, where the attendees learned that HIV-infected patients frequently present with non-specific symptoms similar to those caused by other types of infection, and therefore physicians should not disregard the likelihood of HIV infection from the apparent presentations to ensure early diagnostic confirmation. Session attendees were surveyed with a 6-item questionnaire before and after each session.

Results : The session attendees reported being more confident and positive in diagnosing/treating early-stage HIV infection. There was also a decrease in the percentage of physicians who think that HIV infections should be handled exclusively by specialist physicians.

Conclusion : Early diagnostic confirmation of HIV infection is important for both physicians and patients. This educational program can help physicians control the infection at its early stage.

Key words : human immunodeficiency virus, HIV awareness, general physicians

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Introduction

Human immunodeficiency virus (HIV) infection causes serious symptoms and may lead to death if untreated. It is important that the diagnosis of infection be confirmed and that appropriate treatments be provided at an early stage post-infection to prevent wide dissemination of the virus through sexual contact of the infected person with non-infected individuals^{1,2)}. One of the problematic issues is that the early-stage infection is frequently missed in the real-world setting despite an increasing prevalence of HIV infection in Japan, primarily because the prevalence in Japan

is still relatively low and the symptoms of infection are non-specific, including fever, pharyngitis, lymphadenopathy, rash, oral and/or genital ulcerations, and gastrointestinal symptoms, which may not be considered related to possible HIV infection by primary care physicians^{3,4)}. It is important for physicians to remember and not exclude the possibility of HIV infection based on the patients' symptoms, which are occasionally less distinguishable from those of certain opportunistic infections. HIV infection is also frequently overlooked in patients with syphilis, acute hepatitis B and herpes zoster. To address these issues, we planned an educational program for general physicians to better understand the likely presentations and the importance of diagnostic confirmation of HIV infection at its early stage. The preliminary results of this program are reported here.

Methods

Special sessions were organized twice at the conference

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of the Japanese Society of Hospital General Medicine (March 2017 and September 2018), titled “General physicians learn more about HIV infection” and “General physicians can judge HIV infection”, where session attendees learned that : (1) patients with acute HIV infections usually present with non-specific symptoms (see Introduction) ; (2) patients with HIV infections frequently have previous or concurrent syphilis, acute type B hepatitis, herpes zoster, and other infections ; (3) acute hepatitis B may occur through sexual contact ; and (4) physicians should remember that apparently non-specific presentations and the previous/concurrent episodes mentioned above may indicate possible HIV infection. The importance of HIV-RNA testing in highly suspected cases with negative antigen/antibody results in patients at an early stage of infection was also emphasized at the sessions.

The session attendees were surveyed with a questionnaire before and after each session, as summarized in Table 1. The questionnaire included questions about the importance of early-stage HIV tests in patients with presentations similar to those caused by other infections and about attendees’ mentality regarding HIV diagnosis and treatment. The attendees replied to the questionnaire using a self-response system (Turning Point Audience Response System[®] in combination with Response Ware[®] ; Keypad Japan, Osaka). They were further encouraged to ask free questions at the end of the session.

Results

Figure 1 summarizes the survey results obtained from the two sessions. The first session had 75 attendees, 50 of whom responded to at least 1 of the 6 questions listed in

Table 1. To the first question (Q1), 24% answered Yes, and 76% answered No. The session clearly improved the HIV awareness of the attendees, i.e. the survey performed before and after the session indicated an increase in the percentage of attendees answering Yes to Q2–Q5 (6 to 12%, 41 to 90%, 88 to 100%, and 67 to 83%, respectively) and a decrease in the percentage of attendees answering Yes to Q6 (65 to 50%). The percentage answering No to Q2–Q5 decreased, and that to Q6 increased in a concomitant manner.

The second session was performed a year and a half later with 64 attendees, and all of them responded to at least 1 of the 6 questions. Of the 35 attendees who responded to Q1, 21 (60%) answered Yes, and 14 (40%) answered No. Increased HIV awareness was demonstrated again by the ‘before’ vs. ‘after’ survey comparison, with increased percentages of Yes answers to Q2–Q5 (3 to 23%, 35 to 90%, 67 to 95%, and 15 to 52%, respectively) and a decreased percentage of Yes answers to Q6 (79 to 43%), with a concomitant decrement of No answers to Q2–Q5 and an increment of No answers to Q6.

Discussion

Antiretroviral therapies have greatly improved the prognosis of patients with HIV infections in the clinical setting. However, there are still a substantial number of cases of infected patients who present with characteristic AIDS complications at the time of first diagnosis. Early diagnosis and treatment initiation for the disease are thus quite important for both physicians and infected patients^{1,2)}. The present program’s aim was to promote the awareness of HIV and AIDS in general physicians, many of whom are less familiar with the diagnosis and treatment of this

Table 1 Questionnaire on HIV infection

Q1 : Have you ever made a diagnosis of HIV infection ? ^a (HIV 感染症の診断をしたことがありますか？)
Q2 : Are you confident in diagnosing and treating HIV infection ? (HIV 感染症の診療に自信がありますか？)
Q3 : If a patient in their 30s with herpes zoster visits your clinic, will you suggest an HIV test for this patient ? (30 代の帯状疱疹患者が来院しました。HIV 検査をしますか？)
Q4 : If a patient with acute type B hepatitis visits your clinic, will you suggest an HIV test for this patient ? (急性 B 型肝炎患者が来院しました。HIV 検査をしますか？)
Q5 : Do you want to diagnose and treat patients with HIV infection ? (HIV 感染症の診察をしたいですか？)
Q6 : Do you think HIV infection should be treated by an appropriate specialist physician ? (HIV 感染症は専門医が治療をするべき？)

^a : All questions were presented before and after the session except for this question, which was only asked before the session.

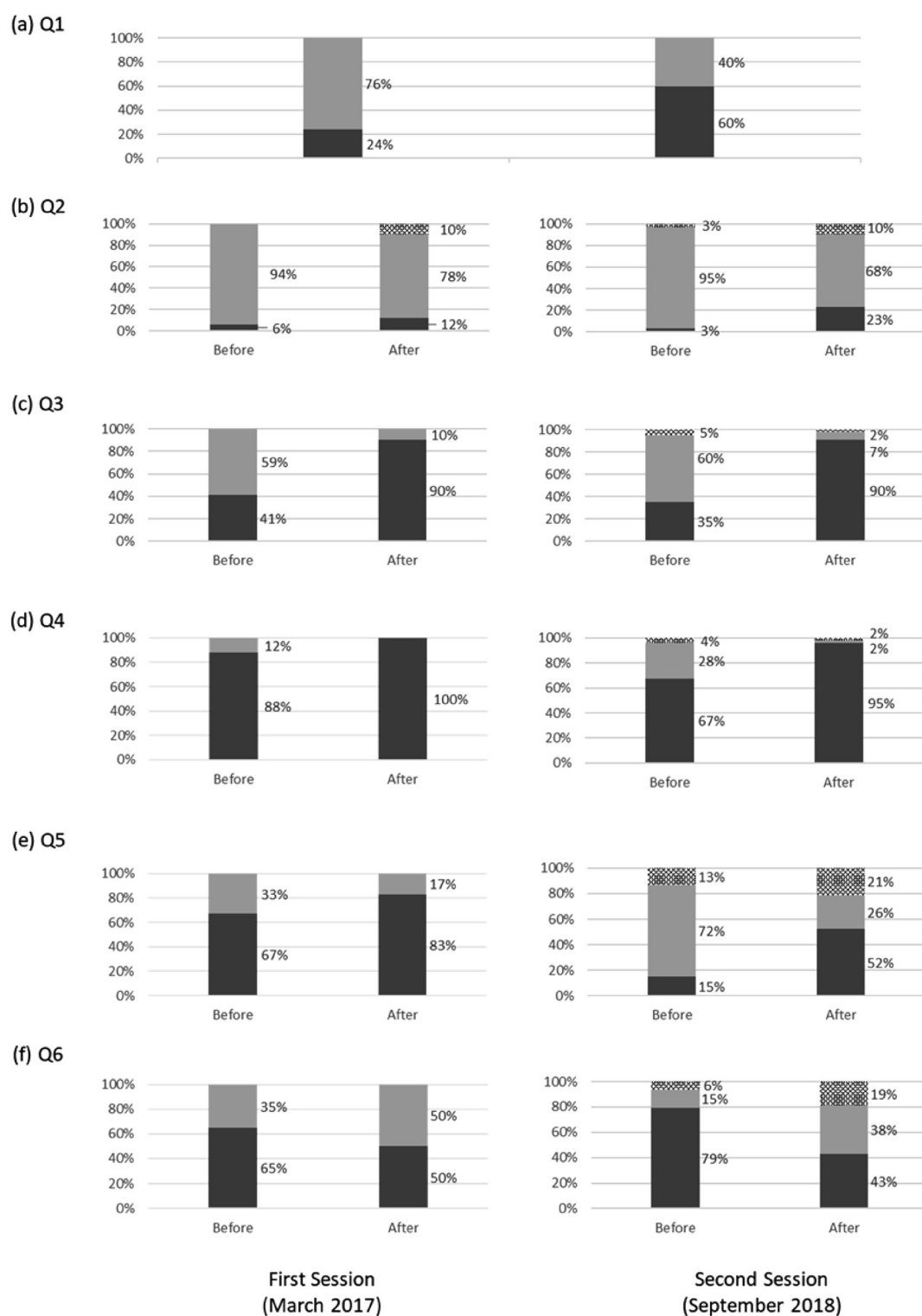


Fig. 1 Survey results from the two sessions.

At each session, the attendees were encouraged to reply to Q1 to Q6 (Table 1) using the self-response system. Q2 to Q6 were asked before and after each session. The percentage of the answer 'Yes' (or 'No' or 'not sure') was calculated for each question based on the total responders. Panels (a) to (f) correspond to Q1 to Q6, respectively. In each histogram, the dark box represents 'Yes', the grey box 'No', and the crosshatch 'not sure'. The percentages are rounded off to the closest integers and hence do not necessarily sum up to exactly 100%.

infection. Educational sessions were provided twice, a year and a half apart, during both of which the attendees learned the importance of diagnostic confirmation and treatment initiation at an early stage post-infection.

While the presented data (Fig. 1) have certain limitations, as the same physicians did not attend each session, and the same attendees did not answer each question of the survey, the attendees learned non-specific symptoms usually presented at an early stage of HIV infection and became more confident and positive in the early diagnosis and treatment of the infection. Another significant achievement of the sessions was a decrease in the percentage of physicians who think that HIV infections should be handled exclusively by specialist physicians. In addition, the attendees raised many questions via the self-response system, and answers to the questions have further promoted their HIV awareness.

HIV-infected patients had a greater burden of comorbidities and comedications with increasing age than people without HIV in Japan^{5,6)}. In this clinical setting, general physicians will have more opportunities to examine patients with HIV infection. We have recently established a Web training system in which general physicians can learn more about HIV and gain practical skills for the diagnosis and treatment of the disease. Using this system, the physicians may further ask a specialist physician for case consultation. While limited to the member physicians of the Japanese Society of Hospital General Medicine at present, the benefit of this system may be widely provided to general practitioners nationwide in the future.

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Conflict of Interest : T.N. and Y.Y. have received honoraria for lectures from MSD K.K.

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総合診療医に向けた HIV 感染症の早期発見と 早期治療推進のための教育プログラム

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背景：HIV 感染症は、早期段階では主として非特異的な症状を呈するためしばしば見逃され、治療開始の遅延につながる。この問題に取り組むため、われわれは、総合診療医が早期の段階で HIV 感染症によくみられる兆候を理解し、また早期診断の重要性を認識するための教育プログラムを企画した。

方法：日本病院総合診療医学会学術総会で特別セッションを2度開催し、参加者に対し各セッションの前後で6項目からなるアンケート調査を行った。

結果：アンケートに対する回答から、各セッション後には HIV 感染症に対する早期の診断/治療に対し、「自信あり」、「積極的に取り組みたい」とする医師の割合が増大したことが分かった。さらに、HIV 感染症には「専門医が取り組むべき」と考える医師の割合が低下した。

結論：HIV 感染症に対して早期診断による確認が医師、患者双方にとり重要である。本教育プログラムは医師が同感染症を早期にコントロールする一助となる。

キーワード：HIV 感染症, HIV 感染症の啓蒙, 総合診療医