IMSUT Hospital

Department of Infectious Diseases and Applied Immunology

感染免疫内科

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Summary

Founded in 1981, IMSUT Hospital started its HIV clinic in 1986, and as of 2024, 1350 HIV-infected patients have visited us. Currently, a total of 566 patients is actively under our clinical management. In addition to HIV infection, we also provide treatment for other infections such as hepatitis and malaria and addressed cases of mpox, an emerging and re-emerging infection prevalent among HIV-MSM. The results of a molecular epidemiological analysis of syphilis, which has become endemic in recent years, are presented.

1. Treatment of HIV/AIDS and sexually-transmitted diseases in IMSUT hospital

Statistical data from IMSUT Hospital indicate that fourteen newly diagnosed individuals with HIV infection visited our hospital during the current fiscal year (January 1 to December 31, 2025). As of December 31, 2025, a total of 568 people living with HIV (PLWH) are under medical management in our outpatient clinic. Among them, 560 PLWH are receiving antiretroviral therapy, and the vast majority have achieved well-controlled plasma HIV viral loads. This favorable outcome is largely attributable to the high level of medication adherence observed among PLWH attending our clinic.

Figure 1 shows the annual number of PLWH receiving care at IMSUT Hospital since 1995.

In addition to the continued conduct of the VOGUE study and the M19-965 Study (NCT06032546), we newly established the J-HIV RWD Collaborative Database Team during this fiscal year. This initiative was launched to address the lack of real-world data research infrastructure for HIV in Japan. As a result of this effort, original research based on this collaborative real-world dataset has already been published, with our team serving as first and corresponding authors.

2. Evaluation of cabotegravir plus rilpivirine in routine clinical settings in Japan: A multicentre study of efficacy, safety and biomarker dynamics

Eisuke Adachi and J-HIV RWD Collaborative Database Team

Long-acting cabotegravir plus rilpivirine (CAB + RPV) represents an alternative to daily oral antiretroviral therapy; however, real-world evidence from East Asia remains limited. This multicentre retrospective study evaluated the clinical impact of CAB + RPV among people with HIV in Japan, with a focus on virological outcomes, treatment continuation, and in-

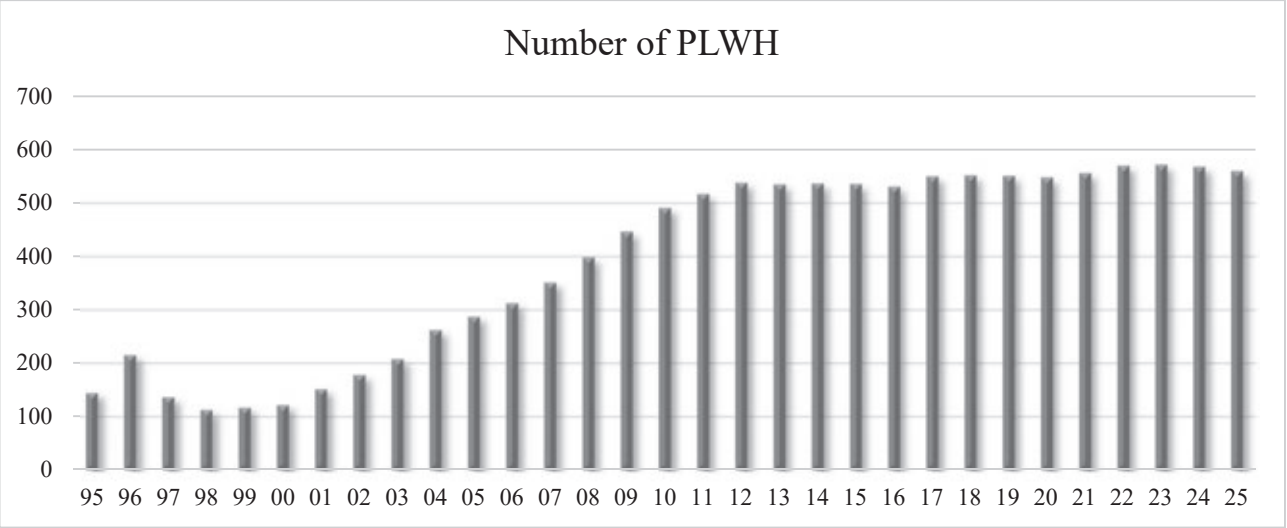

Figure 1. Number of PLWH attending IMSUT Hospital

flammatory markers.

Routinely collected clinical data from eight HIV centres in Japan were analysed for people with HIV who initiated CAB + RPV before January 2024. Virological, renal, inflammatory, and lipid parameters were assessed using follow-up laboratory data through April 2025.

Among 136 participants, over 95% maintained HIV RNA levels <50 copies/mL, and more than 75% sustained undetectable viral loads for up to 14 months. No virological failures were observed. Seven participants (5.1%) discontinued CAB + RPV, primarily due to injection site reactions (ISRs). Overall, serum creatinine and cystatin C levels significantly decreased, although no significant change in serum creatinine was observed among those switching from regimens without renal tubular transport inhibitors. CD4 and CD8 cell counts showed modest declines (median changes: −32 cells/μL and −52 cells/μL, respectively), while the CD4/CD8 ratio and C-reactive protein remained stable. High-density lipoprotein cholesterol increased significantly, whereas low-density lipoprotein cholesterol and the total cholesterol/HDL-c ratio were unchanged.

This study provides the first multicentre real-world evidence on CAB + RPV use in Japan, demonstrating sustained virological suppression and a favourable safety profile, with no apparent impact on chronic inflammation.

3. Month 12 outcomes of switching to long-acting cabotegravir + rilpivirine with an oral lead-in versus continuing bictegravir/emtricitabine/tenofovir alafenamide in the Phase 3b randomized SOLAR study

Eisuke Adachi et al.

Cabotegravir + rilpivirine (CAB + RPV) dosed every 2 months (Q2M) is the only complete long-acting (LA) regimen for maintaining HIV-1 virologic suppression. In some regions, prescribing information mandates a 4-week oral lead-in [1] before initiating CAB + RPV LA. To support clinical decision-making in these areas, we report a pre-specified analysis in adults living with HIV-1 who switched to CAB + RPV LA with an OLI versus continuing daily oral bictegravir/emtricitabine/tenofovir alafenamide (BIC/FTC/TAF) for maintaining virologic suppression in the Phase 3b, randomized, open-label, SOLAR study. In SOLAR, participants with HIV-1 RNA <50 copies/mL were randomized (2:1) to either intramuscular CAB + RPV LA Q2M, with a 1-month optional once-daily OLI of CAB + RPV, or to continue daily oral BIC/FTC/TAF. Month 12 endpoints included virologic response, safety, and patient-reported outcomes. Of 670 participants, 173 (39 %) switched to CAB + RPV LA with OLI, 274 (61 %) switched to CAB + RPV LA starting directly with injections, and 223 (33 %) continued BIC/FTC/TAF. At Month 12, the proportions of participants with HIV-1 RNA ≥50 copies/mL (CAB + RPV LA OLI, 1 % [n = 2/173]; BIC/FTC/TAF, <1 % [n = 1/223]) and HIV-1 RNA <50 copies/mL (CAB + RPV LA OLI, 87 % [n = 151/173]; BIC/FTC/TAF, 93 % [n = 207/223]) were similar between arms. Excluding injection site reactions, adverse events were comparable between arms; however, more participants in the CAB + RPV LA OLI arm had adverse events leading to withdrawal (5 % [n = 8/173] versus <1 % [n = 2/227]). Overall, 87 % (n = 142/163) of participants who switched preferred CAB + RPV LA OLI to BIC/FTC/TAF. Switching to CAB + RPV LA OLI demonstrated comparable efficacy to continuing BIC/FTC/TAF, was well tolerated and preferred by most participants who switched. ClinicalTrials.gov; NCT04542070 (https://clinicaltrials.gov/study/NCT04542070).

4. Contemporary Antiretroviral Therapy Regimens in People With HIV Who Initiated Treatment in the Pre-Antiretroviral Therapy Era

Eisuke Adachi, Yoshiaki Kanno, Michiko Koga, Hiroshi Yotsuyanagi

Since the early ART era, HIV treatment has evolved from NRTI monotherapy or dual therapy to potent combination regimens, including integrase inhibitor–based and long-acting therapies. We retrospectively analysed heavily treatment-experienced people with HIV at IMSUT Hospital who initiated antiretroviral therapy before 1996 and remained in care from April 2019 onwards.

Among 202 individuals who started ARVs before 1996, 23 were still in follow-up after 2019. The median age in 2025 was 64 years. Most initially received NRTI monotherapy or dual NRTI therapy, and 74% had detectable viremia at the time of transition to effective three-drug regimens after 1996. The M184V/I mutation was documented in 30%, and nearly half had prior exposure to lamivudine with virological failure.

Despite long treatment histories and historical drug resistance, the majority achieved and maintained virological suppression on contemporary ART regimens, highlighting the durability and effectiveness of modern therapies in heavily treatment-experienced populations.

5. Sexually Transmitted Treponema pallidum Subspecies endemicum Infection With Atypical Skin Manifestations Outside of Tropical Regions

Eisuke Adachi, Wakana Sato, Hirona Ichimura, Yasutoshi Kido,[1] Hiroshi Yotsuyanagi [1]Graduate School of Medicine, Osaka Metropolitan University

Endemic treponematoses, such as yaws, bejel, and pinta, are classified as neglected tropical diseases and are often referred to as non–sexually transmitted syphilis. Bejel remains prevalent in dry, hot regions such as the Sahel in West Africa, with its primary route of transmission being direct skin-to-skin contact in children. Although sexual transmission is possible, it has not been extensively studied because bejel primarily affects children. Due to the low genetic differences between Treponema pallidum subspecies pallidum (TPA) and other non–sexually transmitted syphilis-causing strains, identifying them without high-resolution phylogenetic analysis can be challenging. Our report suggests that individuals diagnosed with syphilis could potentially include those with bejel, indicating that TEN might be sexually transmitted among Japanese MSM.

6. Favorable Virological Outcome, Characteristics of Injection Site Reactions, Decrease in Renal Function Biomarkers in Asian People with HIV Receiving Long-Acting Cabotegravir Plus Rilpivirine

Eisuke Adachi, Amato Otani, Makoto Saito, Michiko Koga, Hiroshi Yotsuyanagi

Long-acting cabotegravir plus rilpivirine has revolutionized the concept of antiretroviral therapy, but as the causes of virological failure and satisfaction can depend on patient background, real-world data are needed. In this single-center study, we reviewed clinical records of people with HIV (PWH) who received injectable cabotegravir plus rilpivirine between June 2022 and January 2023. We assessed virological and safety outcomes, including injection site reactions (ISRs) and changes in serum creatinine and cystatin C. Seventy-four patients were included. There were no virological failures. Approximately 80% of individuals achieved HIV-RNA undetectable in all visits up to 14 months (median 13 months) after switching. Pain upon injection was significantly more common at the rilpivirine injection site, while delayed pain was significantly more common at the cabotegravir injection site. The serum creatinine (mean difference-0.12 mg/dL, $p < .0001$) and the cystatin C (mean difference -0.077 mg/dL, $p < .0001$) decreased significantly after switching, and in multivariable regression analysis, baseline characteristics did not affect the decrease in these renal function markers. Long-acting cabotegravir plus rilpivirine showed excellent antiviral efficacy and safety in PWH in Japan. ISRs were characterized differently at the cabotegravir and rilpivirine injection sites. Although cystatin C showed decrease after the regimen switch, further confirmation is needed whether cabotegravir plus rilpivirine can improve renal function.

7. Colonoscopy-Based Diagnosis of Dibothriocephalus nihonkaiensis Infection Protruding into the Ascending Colon

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We report two recent cases of diphyllobothriid cestode infection identified during colonoscopy in asymptomatic individuals in Tokyo, Japan. Both patients lacked distinctive dietary habits, consuming only commonly available raw fish. In one case, the tapeworm was found in the terminal ileum; in the other case, the parasite extended into the ascending colon, which is a rare site of detection during colonoscopy. Morphological features were consistent with Dibothriocephalus nihonkaiensis. Blood tests re-

vealed no notable abnormalities. These cases underscore that such infections may occur even in individuals without high-risk dietary behaviors. With increased use of colonoscopy and the global consumption of raw fish, similar detections may become more common, emphasizing the need for clinical awareness, even in patients without recognized dietary risk factors

8. Bioterrorism-related information website management and crisis management

“バイオテロ対応ホームページ” (a website providing information on bio-terrorism in Japanese), which was developed in 2008 to provide information on clinical diagnosis and testing procedures for bioterrorism-related diseases for medical institutions, and was opened to the public in 2016 in anticipation of international situations and mass gathering events in Japan.

9. Pre- and post-travel treatment of imported infectious diseases and tropical diseases at IMSUT Hospital

The pandemic of COVID-19 had unprecedented impact of our life; global transport and travelling was one of the most affected areas. In mid 2022, the number of returnees and travelers consulted gradually increased, and two cases of malaria patients visited the hospital. For the tropical and parasitic diseases, dozens of important medicines essential for treatment of them are not licensed in Japan. Research Group on Chemotherapy of Tropical Diseases, Research on Publicly Essential Drugs and Medical Devices, Grant from Japan Agency for Medical Research and Development had been established to cope with this situation. We are the medical institution of the research group using these orphan drugs if needed, and colleting clinical data.

10. Treatment of hepatitis in IMSUT hospital

About 300 HIV-non-infected patients with liver diseases such as viral hepatitis and NAFLD are under medical management in our outpatient clinic. Several patients were introduced from outside for the treatment of chronic hepatitis C with direct acting anti-virals (DAA) and successfully achieved the sustained viral response (SVR). In addition, we treated HIV-infected patients who developed acute hepatitis C with DAAs, who achieved SVR.

11. High rate of HCV reinfection and the efficacy of standard regimens in men who have sex with men living with HIV

Eisuke Adachi, Yoshiaki Kanno, Michiko Koga, Hiroshi Yotsuyanagi

In Japan, the prevalence of chronic hepatitis C virus (HCV) infection has declined due to the widespread use of direct-acting antivirals (DAAs). However, sexually transmitted HCV remains a concern among people with HIV (PWH), especially men who have sex with men (MSM). We examined PWH newly diagnosed with HCV infection between 2015 and 2024, focusing on reinfections. During this 10-year period, 26 cases were identified (incidence rate: 5.0 per 1000 person-years; 95 % CI: 3.2-7.3), including 7 reinfections (27 %). None experienced more than two episodes. Among the reinfection cases, two individuals without prior DAA treatment received sofosbuvir/ledipasvir for 12 weeks, while five with prior treatment received glecaprevir/pibrentasvir for 8 weeks. All achieved sustained virologic response, and no spontaneous clearance or relapse was observed. Unlike virologic failure, reinfection represents a new, treatable episode. Standard first-line regimens were effective without requiring longer or more costly therapies. These findings support the need to reframe HCV as a recurrent sexually transmitted infection. To ensure sustainable control in high-risk populations, healthcare systems must evolve to allow HCV treatment to be accessible, affordable, and repeatable, as is the case with the management of other common STIs.

12. Sexual Health Clinic at IMSUT Hospital

During this fiscal year, IMSUT Hospital established a self-pay sexual health clinic providing testing and preventive services for HIV, syphilis, and other sexually transmitted infections (STIs). In addition to screening, the clinic offers HIV pre-exposure prophylaxis (HIV-PrEP) and doxycycline post-exposure prophylaxis (doxy-PEP) as preventive interventions against HIV and bacterial STIs.

This clinic not only contributes to the early detection and prevention of STIs but also functions as an integrated service operated by the Department of Infectious Diseases. Individuals diagnosed through the clinic can be promptly linked to specialist-led care and treatment, ensuring timely and comprehensive management of HIV and other STIs.

Publications

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