Report of "Multidisciplinary Approach to Understanding Pulmonary Aspergillosis"

Place: Nagasaki University Hospital, Infectious Diseases Education Centre (IDEC) and Respiratory Medicine Department
Mentor: Prof Koichi Izumikawa

I started my fellowship on 1st February, 2025 and the fellowship ended on 28th February,2025. I returned to India on 1st March, 2025.

During my fellowship, I attended antibiotic stewardship conferences five times a week, ICU ID consultation five times a week, respiratory ID clinics thrice a week, antibiotic stewardship five times a week, respiratory ID clinical conference twice a week, respiratory medicine conference once a week, hematology ID clinical conference, basic research conference once a week and bronchoscopy services twice a week. The routine is as given below in the figure.

	Mon	Tue	Wed	Thurs	Fri
AM	800- ICU ID consultation mtg. at NICE 9- Dr. Iwanaga OPD 3F	800- ICU ID consultation mtg. at NICE 9- BF (Lung cancer, ID) 3F Department of Endoscopy	800- ICU ID consultation mtg. at NICE 9- Dr. Takeda or Dr. YoshidaOPD 3F	800- ICU ID consultation mtg. at NICE 9- BF (ILD) 3F Department of Endoscopy 11-ID Basic research Conference	800- ICU ID consultation mtg. at NICE 9- Dr. Takazono OPD 3F
PM	13-AST conference 15- Respiratoy ID Basic research conference 9F 16- Respiratory ID consultation mtg.	13-AST conference	13-AST conference 14- Respiratoy ID Clinical Conference 12F west ward	13-AST conference 1330- Respiratory medicine conference (9F office) and round (12F ward) 16:30- Hematology ID consultation conference	13-AST conference

During each of the OPD postings, I had ample opportunities to interact with the consultant and able to understand the intricacies of the disease, expectations of the patients and the role of Japanese health-care system in providing care to the patients. During the ICU ID and AST conferences I was made aware of the specific ID-related inputs being conveyed to the consulting team and the chief principles of infection control being practiced in the Nagasaki

University Hospital. During the bronchoscopy postings I was able to see the commonly performed procedures like cryobiopsy, radial EBUS etc. During the research conferences, I came to know about the research initiatives being carried on in the department. I was able to attend several multi-disciplinary meetings and understand the role played by different stakeholders in the effective management of patients with pulmonary aspergillosis and other infectious diseases. During the respiratory ID conference, I got to know about the various admitted patients, their diagnostic reports as well as management strategies. In the hematology-ID conference the different perspectives about the infectious diseases in hematological patients were discussed.

I delivered two lectures (one on my medical system in India with special reference to my practice at my host institute and the other on my research perspectives) both of which were nicely received.

I also was able to see some of the procedures in the laboratory like environmental sampling for *Aspergillus*, generation of samples with a particular concentration of *Aspergillus* conidia etc. The use of Flamingo medium to grow *Aspergillus* was new to me.

Regarding the specific objectives about my study I could gather the following

1. I witnessed the comprehensive management strategy for patients with chronic pulmonary aspergillosis (CPA)and invasive pulmonary aspergillosis and saw that in Nagasaki hospital more of isavuconazole was used as compared to other azoles. Also, liposomal amphotericin-B was used till a maximum dose of 5 mg/kg

2. The prevalence of CPA was around 15-20% of total clinic patients while those of combined CPA and non-tuberculous mycobacterial infection was ~2%. Serum galactomannan was not used to diagnose CPA but BAL GM was used as a supporting modality.

3. I also learnt about the research going on in mouse model, in-vivo tests using NK cells and other immune cells on the disease of aspergillosis

Important points:

I was greatly influenced by the clinical strategies used to diagnose and treat patients with pulmonary aspergillosis as well as the bench-to-bedside studies going on different aspects of pulmonary aspergillosis. The sincerity towards work, emphasis on combined team efforts as well as attention to infection-control measure were very inspiring. I left Nagasaki with several plans to start similar initiatives in my country about patient care and research so that I can address several issues pertaining to my patients afflicted with the same disease. I am deeply indebted to Nagasaki University Hospital, Prof Izumikawa and his dynamic team as well as APSR for giving me this opportunity.