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研究課題名(和文) 日本占領期インドネシアのマラリア戦争 医療・衛生から見えてくる「植民地」社会

研究課題名(英文) The Malaria War in Indonesia during the Japanese Occupation Period: "Colonial" society as seen from medical care and hygiene

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研究成果の概要(和文)：日本占領期インドネシアのマラリア対策に焦点を当て、公私を繋ぐ歴史を解明することを目的とした本研究は、治療薬の流通、開発およびマラリア医療従事者の育成、さらに教育映画や報道を通じ、公衆衛生の周知を行っていたことが解明された。戦時中のマラリア対策は、戦時中の社会状況により変化していったことが解明された。また、世界的供給不足のキニーネは、外交の具として使われ、東南アジア内および同盟国との関係を強化した。

研究成果の学術的意義や社会的意義

人文科学と理科学の研究者からなる本学際研究は、当時の科学者および医療産業のマラリアという「敵」に対する攻略活動を、より具体的に解明できた。この本格的学際研究を通じ、理科学系の知識なく紐解く医療史研究は、根拠資料の解明が困難な、不完全な歴史に陥る可能性があることが明らかになった。このことは、学術的にも意義のあることであり、科学的知見は、政争の具となり得る歴史に歯止めをかける力も秘め社会的意義もある。

研究成果の概要(英文)：Focusing on malaria control in Indonesia during the Japanese occupation period, this research aimed to shed light on a history which connects public and private affairs. Public awareness of government hygiene efforts and the spread of basic public health knowledge could be confirmed and elucidated. This research also clarified that malaria countermeasures changed according to the social situation during the war. Quinine, which is in short supply globally but produced primarily in Java, was also used as a diplomatic tool to strengthen ties within Southeast Asia and with other Japanese allies.

研究分野：History of Science

キーワード：Occupation of Indonesia malaria quinine infectious diseases public health history of hygiene medical foreign policy media strategy

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1 . 研究開始当初の背景

This research project developed out of a JSPS Grant-in-Aid for Scientific Research B (Overseas) project, “A History of Indonesian Society in which Comfort Women Lived” (2013-17). Documents of the Java Military Inspectorate’s medical unit discovered during this research showed a very different picture of society than in previous studies on comfort women. One booklet published in 1944 contained a detailed explanation of health inspection charts for comfort women, showing clearly that venereal diseases were managed not only for comfort women but also for military personnel and civilians, and that venereal diseases were treated as a social problem.

Malaria, the main focus of this study, was one of the most contagious and common diseases in the 1940s, and was thus the subject of various medical and sanitation unit documents, as well as many newspaper and magazine articles. Such medical and sanitation-related documents have objective descriptions and relatively detailed explanations, and at the same time provide detailed information about medical care and hygiene activities; it is thus possible to understand how health policies reflected social conditions and lifestyles of the time and how these affected people. Furthermore, by adding information from newspapers, magazines, and official gazettes, it is possible to clarify what kind of hygiene awareness was disseminated to the broader society and how it was practiced. In the process of reading and interpreting specialized historical materials for full-scale interdisciplinary research in the humanities and sciences, it was clear that that the knowledge of scientific researchers was necessary, which led to the idea of this hybrid research project.

The history of medical care in Indonesia is still a young field, and although there are some studies related to medicine in the colonial period, mainly in Europe, there were no studies that examine society from the perspective of medical and sanitation conditions. During the Japanese occupation period from 1942-45, Indonesia’s medical and sanitation policy was based on the earlier medical care practices of Dutch and Japanese colonies, but at the same time, involved medical practices of metropolitan Japan. Unlike colonial medical history, the history of medical care and hygiene during the Japanese occupation period long remained outside of the scope of historical studies due to language problems. Although there were a small number of medical-political histories and medical-economic histories related to Indonesia at this time (e.g. Goss 2014, Pols 2014, S. Marzuki and Baird 2015), medical care and hygiene themselves are not well elucidated.

In Japan, modern and contemporary Indonesian studies in Japan have focused on fields such as politics and economics. This project’s research on medical care and sanitation initiates a completely new field of research that both clarifies medical and sanitation policies of the time and elucidates Indonesian society at that time from these policies and related practices, although it is still a study of one of the military administrations and is a successor to previous research in Indonesian studies during the Japan occupation.

2 . 研究の目的

This study has aimed to (1) understand medical practices during the Japanese occupation of Indonesia and (2) the actual situation at the time, while (3) detailing policies and guidelines on malaria prevention and hygiene formulated by the Japanese central government, the military administrations, and local officials. This is intended to provide a window onto Indonesian society of the time, through perceiving changes in society and life after implementation of new medical and health policies, focusing on malaria transmission and sanitation in Indonesia and related subjects. This could also contribute to understanding other regions within the Japanese empire.

One unique point of this research is connecting policy, scientific knowledge and social life. Manufacture of malaria medicines, both quinine and the synthetic medicines Atebrin and Plasmochin is connected to the practice and training of Indonesian and ethnic Chinese medical professionals during the Japanese occupation, and that to the state of knowledge about malaria and ability to develop alternative medicines. The neurological efficacy of using malaria in treating brain disorders caused by venereal diseases could connect to hygiene policies and other efforts by the military authorities. Publications in local languages were essential to public health campaigns and medical

propaganda. Crossover and linking of these subjects is an integral part of our objectives.

Focusing on the new field of “medical care and hygiene,” the unique research method in this project unravels scientific documents through interdisciplinary research and transcends the boundaries of humanities and sciences. This research thus elucidates facets of society and people’s lives which cannot be illuminated by humanities and social sciences research alone. In other words, examination of specialized documents on medical care and hygiene are scrutinized and analyzed by scientific experts and social historians to highlight past social life that is more in line with the actual situation.

Presentation of research results in English is critical, as knowledge of the Japanese occupation is weak throughout the world, and interaction with experts throughout the world is essential. Nonetheless, some production in Japanese is important as the historical information that forms the basis of this research could be important both domestically and internationally, contributing to international discussions on the history of medical care in Indonesia during the Japan occupation.

3 . 研究の方法

Focusing on malaria control in Indonesia during the Japan occupation, this study explores local conditions at the time, analyzing health policy and medical practice of the Japanese military governments, exploring the capabilities of Japanese medical industry, examining the health guidance under the military government. It also tries to determine the knowledge, capabilities and efforts of local communities, and produces an overall picture of Indonesian society at that time.

The basic data of this study is official documents, wartime publications, and propaganda films. Although some materials had already been collected, in order to collect further research materials, this project included surveys at archives in Japan and overseas, led initially by our humanities and social science researchers. Major overseas research institutes included the NIOD Institute for War, Holocaust and Genocide Studies [NIOD] in the Netherlands, and the Royal Netherlands Institute of Southeast Asian and Caribbean Studies [KITLV], and in Indonesia, the National Library and the National Archives. Domestic research institutions include the National Diet Library (including both the Okamoto Minoru archive and wartime newspapers), the National Institute for Defense Studies, the Japan Center for Asian Historical Records (JACAR), and the Waseda University Central Library. Additionally, the US Library of Congress and the Rockefeller Foundation Archive provided materials on malaria and public health in Indonesia.

Once relevant materials are located, connecting policy, scientific knowledge and social life requires cooperation of science researchers and historians. For example, this research thus requires exploring manufacture of malaria medicines, both quinine and the synthetic medicines Atebrin and Plasmochin, as well as their availability through archival documents of the time. This is a highly technical subject, best studied by scientists. As most medical professionals during the Japanese occupation were Indonesians, with limited numbers of ethnic Chinese and Japanese doctors, the state of knowledge about malaria and alternative medicines is necessary, requiring knowledge of Dutch and knowledge of medicine to read the medical research before and during the war. Understanding the use of malaria in treating brain disorders caused by venereal diseases similarly require neurological expertise. Hygiene policies and other efforts by the military authorities are best explored through memoirs and administrative documents in Japanese. Additionally, exploration of publications in local languages like the Jakarta daily *Pembangoen* or the Semarang daily *Sinar Baroe* could help explicate public health campaigns and public health propaganda systems.

This research requires concrete data about the local situation. Documents of the 16th Army Japan Military Medical Unit on Java help, occasionally detailing the number of malaria patients, disease symptoms, the handling of medical equipment and the sanitary conditions of the living environment, and details about nutrition which became a problem during the occupation. Other questions are more complex. At the November 1943 General Assembly of the Semarang Medical Association, Dr. Matsukuma, then director of the Semarang Health Bureau and later president of Semarang Medical School, warned that 60% of deaths in the province in 1942 were related to malaria. Why did such outstanding numbers come out in Semarang, and only this year? Was the environment suitable for mosquito breeding, were there traditional preventive measures in each region, and what was the state of medical care after infection? In addition, since the survey period was immediately after the influx of foreign military personnel into the area, was this an

unusual situation and could the Japanese or Allied troops be connected?

In elucidating such special cases in specific areas, we attempt to clarify the overall situation at that time, and determine whether medical policy changed within the Japan military during the Japan occupation, whether children were educated about the threat of malaria in school education, whether public relations activities using neighboring groups were propaganda for preventive measures, whether films were made or broadcast in villages. A fundamental question is whether quinine was distributed in the region. Java was the world's number one producer of cinchona bark, the source of quinine, but some individuals have claimed that quinine was given almost exclusively to Japanese. While the importance of the Indonesian labor force as a human resource was touted, was quinine not in circulation among Indonesian laborers? Despite the efforts to suppress malaria, which is highly infectious, was malaria control neglected as a local reality? The Japanese military's malaria response could help elucidate malaria's impact on economic and military operations.

In order to achieve results within the limited period of four years, this project planned cooperation with malaria researchers, historians of science, and medical historians from the United States, Australia, the Netherlands, and the United Kingdom, in addition to initiating more interdisciplinary research collaboration with historians interested in the Japanese occupation period, as well as nutritionists, and neuroscientists. In order to progress quickly, research was planned for 10 points: (1) the medical system: number of hospitals, region, size, healthcare professionals and practices, (2) manufacture, distribution and utility of quinine and other drugs, (3) public health, policy and practice from national to village levels, (4) manufacture, distribution and management of medical devices and medical devices, (5) education and practice of nurses, (6) traditional medical practices in Indonesia and the benefits of medicinal herbs, (7) nutritional guidance for patients and the private sector, (8) malaria and higher medical education, (9) malaria and other public health education, (10) malaria mosquitoes and malaria parasites, (11) dissemination of information on malaria control in the media, etc.

Clarifying (1) ~ (11) above, along with developing a general history of military government and society, could explain a great deal about public malaria control (prevention and treatment). In addition, in order to clarify the practice of malaria medicine and malaria prevention measures, this study also aimed to investigate and analyze diaries that describe the situation on the ground, postwar Allied military reports, and memoirs of Japanese, Indonesian, European, and Indo-European medical professionals. Finally, to understand the policies for production and distribution of malarial medicines and malarial prevention tools like mosquito coils, examination of historical documents related to army policies, company production, medical research and foreign relations from domestic archives might be needed.

4 . 研究成果

In order to achieve results promptly, from the first year we promoted collaboration with overseas researchers and international dissemination of this research. In October 2019, an international symposium was held at the International House of Japan (Roppongi) about "Other Facets of Medical Studies on the Japanese Occupation." Horton (PI) and Yamamoto (Co-I) gave presentations, while research collaborator Jim Collins of National Malaysia University presented "Public Health Education before and after the Japanese Occupation: Malaria" and research collaborator Kaoru Kochi discussed health propaganda films about Malaria.

Critical research materials were collected throughout the project, including during Covid-19 travel bans via the internet. In person overseas research surveys were conducted in the Netherlands and Indonesia. Research was conducted the Netherlands in July 2019 and January 2020, examining wartime newspapers and magazines. Examination of *Pewart* *Selebes*, an Indonesian-language newspaper published in Celebes, where the Navy Civil Government was located, began for use in a survey of health policy and public health measures in the naval area. These made it clear that concern over health issues was not limited to Java and provided limited data on malaria in these areas. In early February, the principal investigator and Co-I Agahari went to Indonesia to collect prewar medical journals, wartime publications and to examine documents at the National Archives.

In FY2020, due to the new coronavirus infection, overseas research surveys and

research meetings involving travel were canceled or drastically reduced. Under these circumstances, remote meetings allowed interdisciplinary research discussions and exchange of information and exchange opinions, and facilitated creation of new awareness of the importance of this research on epidemics and society. Although only two academic papers were published during this year, each researcher continued to examining historical materials previously collected; the ongoing experience of the novel coronavirus was also useful for analyzing the society, politics, and medical system related to infectious diseases. As a result, in addition to research on post-malaria response and post-disease treatment, which is the core of this study, an additional need for research on epidemic prevention became clear.

In mid-2021, a double-panel was organized for the 2021 EuroSEAS Conference held in the Czech Republic entitled “A Tropical Disease Between Tokyo and Java: Intertwining Histories of Malaria.” In addition, in order to promote further research and disseminate our research, researchers from the United Kingdom, the United States, Indonesia, and Malaysia engaging in occupation period medical research related to Japanese territories were invited to join a remote international symposium/workshop, the “First International Workshop--Malaria Wars: The War against Malaria in Japanese Occupied Indonesia” in which all project researchers presented their findings. As part of F2021 activities, papers were presented at a conference on medical history in Asia held (online) in Singapore in 2022 and a panel organized for the 2022 EuroSEAS conference in Paris. In addition to presentations in international conferences, research results have been published. Due to changing circumstances, some research results were issued through university publications to increase speed of dissemination and ensure Open Access, while other results are under review at international medical history journals.

This research indicated that both cinchona bark and quinine production during the war declined, but also that military and civilian need for quinine in Indonesia and throughout Japanese controlled Asia was far beyond production capabilities, even without considering the quinine exported to allies. The government did attempt to create distribution policies for quinine and synthetic drugs. In fact, several Japanese companies were capable of production of synthetic Atebrin and Plasmochin, and did produce these drugs during the war. Quinine could also be a diplomatic tool, both to smooth relations within Southeast Asia as well as to cement ties to allies overseas, including Afghanistan and Germany. Subsequently, there were efforts to develop herbal medicines, including one for malaria (*cassia alata*) which showed potential for widespread use, even potentially reducing the importance of industrial medicine production. A series of medical schools were created, both for doctors (the Jakarta Medical College) and for nurses and “malaria technicians.” The local press played an important part in public health education, as well as in distributing information about the situation with respect to epidemics and the government efforts to respond. Educational films, already experimented with before the war, were of great significance during the occupation, at least on Java. Production of Japanese style mosquito repellants from chrysanthemum flowers began to be developed before the war, and were still of some importance during the war, but evidence is scarce. Some evidence for other malaria prevention efforts were also found, and progress was made on medical troops activities in eastern Indonesia.

All these results suggest the need to extend the research to other forms of malaria prevention and a more complete study of healthcare systems. In recent years, there has been a tendency to promote interdisciplinary research, but the focus of interdisciplinary research in medical science and history in this project is unique and has the potential to become a new academic field in the future.

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〔図書〕 計0件

〔産業財産権〕

〔その他〕

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6. 研究組織

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7. 科研費を使用して開催した国際研究集会

〔国際研究集会〕 計2件

国際研究集会 Other Facets of Medical Studies on the Japanese Occupation in Indonesia	開催年 2019年～2019年
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8. 本研究に関連して実施した国際共同研究の実施状況

共同研究相手国	相手方研究機関
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