Traveler’s rickettsioses and domestic rickettsioses in Japan in 2011
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Background: Various rickettsioses distribute worldwide. Scrub typhus and Japanese spotted fever are known in Japan. Each rickettsiosis is reported about 400 cases and over 100 cases every year and has seasonal and geographical characteristics. In contrast, traveler’s rickettsioses are febris acute diseases to need attention for all season and nationwide. In 2011, we experienced a laboratory diagnosis of various rickettsioses.

Methods: In many time, untypical cases and imported cases are requested to perform laboratory diagnosis for our laboratory. We performed several PCR tests, targeted different rickettsial sequence regions, and measure antibody titer. We detected a rickettsial specific gene from acute phase samples (eschars, skin biopsy of rash and whole blood) and confirmed antibody titers elevation by paired sera.

Results: Three African tick bite fever cases were diagnosed (case 1 traveled to Swaziland and case 2 to South Africa in January, and case 7 traveled to Zimbabwe and Botswana in December). Case 3 was forgrin traveler from South Africa, and diagnosed as Bou-tonnese fever. Case 5 was scrub typhus who traveled to Malaysia in March. Case 6 was murine typhus, who stayed in Thailand and showed acute respiratory disorder syndrome in April. On the other hand, case 4 was suggested as the new spotted fever group Rickettsia by results of genetic sequence analysis of PCR products and showed antibody elevation against Rickettsia conorii.

Conclusion: Antigenic cross-reactivity are high among spotted fever rickettsia group, there is a limit for differentiation of infected Rickettsia species by serologic diagnosis. In addition, members of spotted fever group Rickettsia have increased until now. Spotted fever rickettsioses show variety in clinical symptom, and have various outbreak situation and distribution. Therefore, history and episodes of the patients before onset are extremely important. In this presentation, we summarize traveler’s rickettsioses and domestic rickettsioses in 2011 in Japan.

Malaria and co-infection among traveller in a refferal hospital: a case series
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Background: A referral hospital in tropical region often received referral malaria patient with many co infection undiagnosed and have no respone to the therapy from the local hospital. Because of the inadequate therapy before, the referral patient usually have atypical sign and symptoms. The epidemiology of infection from the region where patient stay should take into consideration because patient could have multiple infection.

Methods: Here we report a case series of three referrals patients of Gatot Subroto Central Army Hospital Jakarta, Indonesia with mix falciparum and vivax infection, falciparum and H1N1, vivax and dengue.

Results: Case 1 was a male patient with sudden onset of continuous high grade fever for three days. He was an army on duty referred
from local hospital in Papua, an endemic malaria region. He also had chilled and diaphoresis. The laboratory result was pancytopenia, positive IgM anti dengue, and positive vivax from peripheral blood smear.

Case 2 was a male patient with flu like illness for three day and he just arrived from pantai gading an endemic malaria region, no history of animal contact but there was a pandemic of H1N1 session. At presentation in referral hospital, his laboratory result was pancytopenia. The laboratory result for oropharyngeal swab is positive for H1N1 infection, and his rapid malaria test was positive falciparum.

Case 3 was a male patient with mixed malaria infection with falciparum and vivax. The vivax parasite was detected on peripheral blood smear one month after finished falciparum treatment. The vivax and falciparum parasite was undetected at first presentation in referral hospital due to kina treatment in local hospital, but the IDT for falciparum was (+) and the peripheral blood was pancytopenia, patient was a traveler in East Borneo and never had malaria before.

Conclusion: A Raffer hospital in Indonesia as one of tropical country could have referred patients with multiple infection with vary clinical manifestation. One clinical condition could be more prominent than other in one patient, lead to a miss in diagnostic. A careful examination, including taking information of history of travel, epidemiology, and complete laboratory examination could detect the other hidden infection.

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Novel spotted fever group rickettsiosis? in a Japanese traveler returned from India

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Background: Various spotted fever group rickettsioses distribute worldwide, and cause human acute febrile illness. Rickettsioses are important as traveler’s infectious diseases. We experienced a rickettsiosis of Japanese returned from India.

Methods: (Case presentation) A 66-years-old female traveled to south part of India for a week. Next day returned, she complained general malaise and anorexia. On day 7 after onset, she developed a fever and showed skin rash, and saw a local doctor. Splenoma was recognized by the abdominal echo examination. At that time, laboratory data showed thrombocytopenia (9.1 x 10^10/L), liver dysfunction (AST 92 IU/L, ALT 97 IU/L), and elevation of C-reactive protein (20.6 mg/dl). She admitted to our hospital from a local doctor.

Results: Fever and laboratory abnormalities improved by the treatment with levofloxacin and ceftriaxone. However, the skin petechial rash and edema of both legs continued. Malaria, typhoid fever, dengue and chikungunya fever were negative by specific tests. On the other hand, IgG antibodies to Rickettsia conorii Malish 7 and Rickettsia japonica YH elevated with paired sera and rickettsiosis was suspected. She was treated with minocycline in addition and her residual symptoms disappeared. Using stored whole blood of acute phase, PCR was performed for several rickettsial genes. Only ompA-targeted PCR showed positive. Its sequence was identical with Rickettsia sp. CMICMICO, of which ompA sequences were partially registered in 2010.

Conclusion: A novel rickettsiosis was diagnosed in a Japanese traveler patient returned from India. This rickettsiosis showed mild clinical course without specific antibiotic treatment, although some symptoms remained. Even now, it is possible that unknown rickettsioses distribute worldwide. The information of this detected Rickettsia sp. is limited. Therefore, it is need to isolate from patients for additional analysis.

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Epidemiology of malaria-intestinal helminth co-infection among children and adults in Ona-ara local government area, Oyo state

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Background: Co-infection of malaria-causing parasites with intestinal helminths is a public health concern and has not been fully explored in Nigeria.

Methods: A cross-sectional survey was conducted among 641 consenting household heads, questions were based on demographics, household environment/hygiene, malaria/helminthiasis prevention practices. Single stool and/or finger prick blood samples were collected from 341 children (6 months-13 years) and 678 adults (≥14 years). Kato-Katz and formol-ether techniques were carried out on stool samples before microscopy; Giema-stained thick blood smears were used to screen for malaria parasites. Subsequently, 211 consenting asymptomatic individuals with patent malaria parasitaemia, irrespective of the presence or absence of intestinal helminth, were followed until they developed acute malaria or follow up period elapsed (6 weeks). Data were analyzed using descriptive statistics, Chi-square, Logistic regression, Kaplan–Meier and Log-rank statistic.

Results: Mean age of household heads was 46.0 ± 1.3 years, 9% used mosquito nets, 50% managed malaria at home first before visiting other health care providers. Many (55.7%) used drugs to prevent worm infection; (21.0%) used herbs while 23.3% did not practice deworming. The mean age of children and adults tested were 5.9 ± 0.68 and 45.1 ± 2.5 respectively. Prevalence of asymptomatic malaria, intestinal helminth infections and malaria-intestinal helminth co-infection were 26.7%, 22.1%, and 13.9% respectively. Ascaris lumbricoides (94.0%), Strongyloides stercoralis (2.0%), Hookworm (2.0%), Trichuris trichuria (1.0%) and Enterobius vermicularis (1.0%) were identified. Children were more likely to be co-infected than adults (OR = 2.7; CI = 1.1 - 6.6). Children whose head of household had no education were more likely to be co-infected than those whose head of household had were educated