

## THE PRESENT STATUS OF PEDICULOSIS IN JAPAN

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Lice infesting only humans include three species, the head louse (*Pediculus capitis*), the body louse (*P. humanus*), and the pubic louse (*Phthirus pubis*). The number of people infested head and body lice has tremendously decreased according to the thorough application of insecticides such as DDT during the post-World War II period, apparent improvement in public health and environmental health in Japan. In 1971 the application of organochlorine insecticides such as DDT and BHC was banned and alternative insecticides for control of head lice was missing in Japan. The pediculosis capitis broke out gradually among nursery school, kindergarten and primary school for ten years after 1971 ban. Since 1981, the number of cases of pediculosis capitis was gathered from local governments and health centers and forwarded to a division of Ministry of Health, Labour and Welfare (MHLW). The number of pediculosis capitis cases was the largest involving about 24,000 cases in 1982, however, the number gradually decreased to 1,900 cases in 1987 according to extermination using new insecticide, fenothrin. The recent data shows there were ca 8,000-9,000 cases / year, although above 300,000 package of medicine were marketed. This means that only few of pediculosis cases were reported to local governments or health centers. Body louse is the vector of three infectious diseases: epidemic typhus, relapsing fever and trench fever. Tokyo Metropolitan Government reported an estimated number of homeless people officially and the recent report in 2000 showed that there were 5,700 homeless in Tokyo. The MHLW also reported that estimated total number of homeless people in Japan was above 24,000. The number of homeless in large cities in Japan is gradually increasing during recent years, according to the business recession and the rising of unemployment. The infestation of body lice in homeless people became common in Tokyo and ca 5-10 % of homeless was infested with body lice. Recently, we detected DNA fragment of *Bartonella quintana*, the pathogenic agent of trench fever, from body lice infesting homeless people in Tokyo by PCR. The nucleotide sequences of the PCR products showed the identities of *B. quintana* by BLAST. The DNA of *B. quintana* was also detected in blood collected from homeless, but we failed to isolate the causative agents. Specific antibodies, IgG and IgM against *Bartonella* spp. were also detected from the serum of homeless using IFA kit and serological testing revealed that more than half of homeless had specific antibodies to *Bartonella* spp. It is shown that urban trench fever continued to be transmitted among homeless people through body lice and other sources in Japan