A case of human tick bite by a nymphal tick, 
*Haemaphysalis hystricis* (Acari: Ixodidae), in Japan

Takeo YAMAUCHI1), Yukie SHIMAZU2) and Hideo MIZUTA3)

1) Toyama Institute of Health, Nakataikoyama, Imizu, Toyama, 939-0363 Japan
2) Center for Public Health and Environment, Hiroshima Prefectural Technology Research Institute, 1-6-29 Minami, Minami-ku, Hiroshima, 734-0007 Japan
3) Kobe Quarantine Station, Ministry of Health, Labour and Welfare, 1-1 Toyahama-cho, Hyogo-ku, Kobe, 652-0866 Japan

(Received: 26 January 2009; Accepted: 9 March 2009)

Abstract: We describe a case of human tick bite by a nymphal tick, *Haemaphysalis hystricis*. The tick was found on the skin at the inner side of the right brachium in a 35-year-old Japanese woman, who had gone to a Yaeyama palm tree *Satakeentia liukiuensis* forest on Ishigaki-jima, Ryukyu Archipelago, Japan. The tick was identified as a nymph of *H. hystricis* based on its morphological characteristics. This is the fourth case of a tick bite by *H. hystricis* and the second case by a nymph in Japan.

Key words: infestation, nymph, Okinawa Prefecture

INTRODUCTION

The tick *Haemaphysalis hystricis* is distributed in Japan, China and Southeast Asia (Takada, 1990), and is known as one of the most important vectors of *Rickettsia japonica*, the agent of Japanese spotted fever (Takada et al., 1992; Inari et al., 2006; Mahara, 2007). To date, only three cases of human tick bite by *H. hystricis* have been recorded in Japan (Yamaguti, 1989, 1994; Saruta et al., 2001; Mahara, 2007). This report is the fourth case of a human tick bite by *H. hystricis* in Japan.

CASE REPORT

The patient was a 35-year-old Japanese woman. She surveyed larval mosquitoes by a pipet and dipper in the forest of Yaeyama palm tree *Satakeentia liukiuensis* at Yonehara, Ishigaki-jima, Ryukyu Archipelago, Japan, on June 25, 2006. Just after moving away from the forest, she noticed a tick attached on the inner side of her right brachium (Fig. 1). The bite was not painful or itchy. She twisted the tick slowly and removed it herself, and preserved it in 70% ethanol. The area that...
was bitten by the tick was tinged red, but other symptoms were not found. The skin lesion from the tick bite was completely healed within several days. She did not go to a hospital, and no medical treatment for the tick bite was performed.

We identified the tick as a nymph of *Hystricis* (body length excluding mouth parts 1.3 mm and body width 0.8 mm) based on the tick morphological characteristics (Fujita and Takada, 2007).

**DISCUSSION**

As mentioned above, human tick bites by *Hystricis* are rare in Japan. The patient described herein is the fourth case of a tick bite by *Hystricis* and the second case by a nymph in Japan (Table 1).

Yamaguti (1989, 1994) reported the first case of a bite by a nymphal *Hystricis* in Japan, but detailed information was not documented. Hence, the present report is the first to show the age and sex of the patient and the lesion site.

Both cases of bites by nymphal *Hystricis* were found in the Ryukyu Archipelago on February (Yamaguti, 1989, 1994) and June (present case). Nymphs of *Hystricis* were collected from vegetation at monthly intervals in a field survey from January to June in Amami-oshima, Ryukyu Archipelago (Kitaoka and Suzuki, 1974). Hence, it is highly possible that human tick bites by the nymphs of *Hystricis* occur during this period in the archipelago. Immature ticks are small and not often seen until they have fully engorged with blood, so it is assumed that numerous unreported cases of tick bites have occurred.

**ACKNOWLEDGEMENTS**

This study was supported in part by Grant-in-Aids for Scientific Research on Emerging and Re-emerging Infectious Diseases from the Japanese Ministry of Health, Labour and Welfare.

**REFERENCES**


