Research Note

Three Japanese cases of bites by imported ticks

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Abstract: We report here three Japanese patients who suffered tick bites while travelling overseas: a female *Ixodes holocyclus* in Sydney, Australia, a nymph *Dermacentor* sp. in Malaysia and a female *Dermacentor andersoni* in New Hampshire, U.S.A. No infectious illness was observed in the three patients (two males and one female) after the ticks were removed.

According to Hatsushika and Okino (1997), hard tick bites by 7 overseas species have been reported for 11 patients including one reported by us (Miyamoto and Kato, 1996). An additional two bites by *Ixodes holocyclus* from Australia have also been reported (Isoda *et al.*, 1998, Yajima *et al.*, 1998).

Recently, over fifteen million Japanese are said to travel annually all over the world for many reasons. We encountered three ixodid tick bites in patients returning from foreign travel in 1999.

Ticks and/or mites play an important role in transmission of various pathogens to man (tick-borne encephalitis, Rocky Mountain spotted fever, Siberian tick typhus, Q fever, ehrlichiosis, Japanese spotted fever, scrub typhus, Lyme disease,

tularemia, and babesiosis). Thus, tick bites can be dangerous.

CASE REPORT

Case 1. The patient was a 46-year-old man, who went cruising around the coastal seas of Sydney, Australia, at the end of December 1998. After returning home to Kawasaki, Kanagawa Prefecture, in January 1999, he found a tick on the right side of the scapular region.

The tick was removed with a forceps at a clinic on January 11. The semi-engorged tick (8×5 mm) was easily removed from the skin (Fig. 1).

Erythema, about 18 cm in diameter, was found at the site of the tick bite. Laboratory tests for haematology and biochemis-

Fig. 1. Dorsal (a) and ventral (b) views of *Ixodes holocyclus*.

try gave normal results. Antibody titer for Lyme borreliosis was negative on the same day and six months later. No medication of any kind was administered at the patient's request.

The detached tick was identified as a female *I. holocyclus* by characteristic features, such as anal grooves rounded anteriorly, and curving behind the anus to meet in a somewhat elongated point. Each coxa had an external spur, and the external spur of coxa I was longer and more pointed than that on coxae II, III, and IV (Roberts, 1970).

Case 2. The patient was a 41-year-old man, who felt pain on the right side of his neck and found a tick and removed it with his fingers on January 6, during a trip in Malaysia.

After returning home, he found reddening, swelling, and more severe pain at the site so he went to a hospital, bringing with him the tick he had removed (Fig. 2). He was given amoxicillin and loxoprofen sodium. Laboratory tests proved normal, and antibodies of Lyme disease were negative.

The removed tick was identified as a nymph *Dermacentor* sp. (5×3 mm) by

Fig. 2. Gnathosoma and scutum of nymphal *Dermacentor* sp.

characteristic features (eyes on both sides of the scutum, a coxa on each leg, and lack of a genital aperture). This specimen was the same as that in an imported tick bite case from Nepal (Miyamoto and Kato,

Fig. 3. Dorsal view of engorged *Dermacentor andersoni* (right side is unengorged *Ixodes persulcatus*).

1996). It is thought that this tick is widely distributed in Asia.

Case 3. The patient was a 61-year-old woman, who stayed one month from May 21 till June 21, 1999 in the town of Rye near Portsmouth, New Hampshire, U.S.A.; she noticed the tick on the back side of her neck. After returning home, she went to a hospital and had the tick removed with a forceps on June 22. The engorged tick was easily removed from the skin of the neck (Fig. 3).

She was given amoxicillin and minocycline for two weeks.

The removed tick was identified as a replete female *Dermacentor andersoni* (10 × 6.5 mm) by morphological features, such as eyes and festoons are present, Coxa I bifid, external spurs on coxae II, III and IV a little longer than the basal width, internal spurs on coxae II and III short, lacking an internal spur on coxa IV (Arthur, 1960).

Fortunately, no signs of infectious illness have been observed in these three patients up to the present.

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摘 要

輸入マダニ刺咬症の3例

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1999年に外国を旅行中にマダニの寄生を受けた日本人3症例を経験した。1月にオーストラリア・シドニーから帰国した男性(46才)の右上背部に半飽血の *Ixodes holocyclus* 雌, 同年1月にマレーシアを旅行中の男性(41才)の右頸部に *Dermacentor* sp. 若虫, 同年6月に米国東海岸ニューハンプシャーのライ町から帰国した女性(61才)の右後頸部に飽血した *Dermacentor andersoni* 雌がそれぞれ寄生した。各ダニは数日から2週間余の寄生期間であったが, 幸い3症例は現在まで健康に経過している。