Epidemiological survey of *Microsporum canis* infection diagnosed at Nagasaki University Hospital for 20 years (1996-2015)

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【Introduction】

In Japan, the *Microsporum (M.) canis* infection had been reported since 1990's as a causative fungus species of an increasing tinea capitis (*T. capitis*) and tinea corporis (*T. corporis*) patients. On the other hand, since 2001 in Japan, *Trichophyton (T.) tonsurans* infections (*T. capitis* and *T. corporis*) were become reported increasing especially among the high school students related to contact sports playing, in contrast to the remarkable decrease of *M.canis* infection. To clarify the present situation, we surveyed the trend of *M.canis* infectious in Nagasaki area.

【Material and Method】

No. of Cases 1996 ~ 2000 : 10177 cases
 2001 ~ 2005 : 10347 cases
 2006 ~ 2010 : 7573 cases
 2011 ~ 2015 : 3244 cases

The clinical samples that gathered from tinea patients had been send mainly by dermatologists of Nagasaki area. Identification of dermatophytes was made by macro- and micro- morphology of primary isolates and for the difficult strains, the molecular biological examination.

【Results】

M.canis was identified in 196 cases (1.2%) from 1996 to 2000, 123 cases (1.2%) form 2001 to 2005, 145 cases (1.9%) from 2006 to 2010, 170 cases (5.2%) from 2011 to 2015, showing the isolation rate of *M.canis* tend to increase.

The distribution among age groups was showed in Fig.1. With female patients (total of 387 cases), under 19 years old (0-9 years old: 83 cases, 10-19 years old: 74 cases) and over 60 years old (75cases) accounted for the most. Recently the increase of female cases of over 60 years old was conspicuous (Fig.2-A).

With male patients (total of 156 cases), under 9 years old (86 cases) were affected most. This tendency did not change for recently 20 years (Fig.2-B).

Transmission from animals was examined and 157 cases in 634 (24.8%) were confirmed to relate with pet animals, especially cats. With the cases of familial occurrence, the rate increased up to 60.4%.

In Japan, the infestation of *T.tonsurans* was increasing since recent 20 years, especially from 2006 in Nagasaki. Therefor it became important to know the causative fungus species of tinea lesions for the effective control of infection souses. In the patients over 20-year-old (Fig.4-A), *T.rubrum* occupied the most part of the causative species in *T. corporis*. It tended to be similar even in tinea faciei (*T. faciei*) and *T. capitis*. On the other hand, *T. tonsurans* was the most mainly identified even in either disease types in the patient of 19-year-old or less (Fig.4-B). However, *M.canis* occupied 10~20% in either age groups and types of tinea lesion.

【Conclusion】

M.canis is proved still an important dermatophyte species in Nagasaki prefecture among children and aged females suggesting their frequent contact with pet animals.