High prevalence of *Taenia saginata* taeniasis and status of *Taenia solium* cysticercosis in Bali, Indonesia, 2002–2004

T. Wandra, P. Sutisna, N.S. Dharmawan, S.S. Margono, R. Sudewi, T. Suroso, P.S. Craig and A. Ito

*a* Directorate General Communicable Disease Control and Environmental Health, Ministry of Health, Jakarta, Indonesia

*b* Department of Parasitology, Asahikawa Medical College, Midorigaoka-Higashi 2-1-1-1, Asahikawa, Japan

*c* Department of Parasitology, University of Udayana, Bali, Indonesia

*d* Faculty of Veterinary Medicine, University of Udayana, Bali, Indonesia

*e* Department of Parasitology, University of Indonesia, Jakarta, Indonesia

*f* Department of Neurology, University of Udayana, Bali, Indonesia

*g* Cestode Zoonoses Research Group, Bioscience Research Institute and School of Environment and Life Science, University of Salford, Greater Manchester, UK

Received 27 April 2005; revised 15 June 2005; accepted 15 June 2005. Available online 30 September 2005.

**Summary**

An epidemiological survey of taeniasis/cysticercosis was carried out in one semi-urban and two urban villages in three districts of Bali, Indonesia in 2002 and 2004. In total, 398 local people from 247 families were diagnosed by anamnesis and clinical examinations, and 60 residents were suspected to be taeniasis carriers. Among 60 suspected carriers, 56 persons expelled a total of 61 taeniid adult worms after praziquantel treatment. From 398 residents, 252 stool samples were available for analysis of taeniid eggs, coproantigens or copro-DNA for identification of taeniid species, and 311 serum samples were available for detection of antibodies against *Taenia solium* cysticercosis. Taeniasis prevalences were highly variable among three villages (1.1–27.5%), and only one case of cysticercosis due to *T. solium* infection was detected. All expelled tapeworms were confirmed to be *Taenia saginata* by mtDNA analysis. There was no *Taenia asiatica* human case in Bali. Case control analysis of 106 families chosen at random from 179 families in 2004 and another 106 families from non-endemic areas revealed that risk factors of *T. saginata*
taeniasis for families were: level of education ($P < 0.01$); consumption of beef *lawar* ($P < 0.01$); and the source of *lawar* ($P < 0.01$).

**Keywords:** Taeniasis; Cysticercosis; Copro-ELISA; Copro-DNA; mtDNA; Bali

**Diakses dari:** http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B75GP-4H74M7H-3&_user=10&_rdoc=1&_fmt=&_orig=search&_sort=d&_docanchor=&view=c&_searchStrId=1002985393&_rerunOrigin=scholar.google&_acct=C000050221&_version=1&_urlVersion=0&_userid=10&md5=c7e6b6eb09d62f2ee4efadf7fee4ba6d