ORIGINAL ARTICLE

The prevalence of tongue lesions in Malaysian dental outpatients from the Klang Valley area

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OBJECTIVES: To determine the prevalence of tongue lesions in Malaysian dental outpatients from the Klang Valley area.

SUBJECTS AND METHODS: A cross sectional study was conducted on 600 Malaysian outpatients (257 men, 343 women, mean age, 37.7 years) attending the Primary Dental Care Unit at the Faculty of Dentistry, University of Malaya. Demographic and medical data were recorded for all respondents.

RESULTS: One hundred eighty-one patients (30.2%) (81 men, 100 women, mean age 42.0 years) were diagnosed with at least one tongue lesion (n = 207) at the time of examination. Of these, 24 patients (4%) had two or more tongue lesions present synchronously. Seven different lesions were diagnosed: fissured tongue (13.8%), cribrae tongue (7.8%), pigmented tongue (6.2%), geographic tongue (2.2%), ankyloglossia (1.7%), hairy tongue (1.0%) and median rhomboid glossitis (0.2%). Their racial prevalences were Malays (n = 65, 10.8%), Indians (n = 62, 10.3%), Chinese (n = 53, 8.8%) and other race (n = 1, 0.2%). A significant relationship was observed between cribrae tongue and race; among four types of tongue lesions (fissured tongue, geographic tongue, cribrae tongue and pigmented tongue) and age; and between cribrae tongue and gender (P < 0.05).

CONCLUSIONS: Distribution characteristics of tongue lesions in Malaysians are important as local reference data in the daily clinical practice.

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Introduction

The tongue is an accessible organ of the oral cavity and it has been used for millennia as an indicator of health in both Western and Eastern medical philosophies. Presence of tongue lesions has been traditionally considered as a disorder of primary concern regarding oral and general health and a good reflect of systemic diseases. Although easily examined, the tongue and its lesions often present a diagnostic and therapeutic dilemma to the clinician. Therefore recognition and diagnosis of common lesions that may occur on the tongue is important to obviate from unnecessary or over treatment.

Most epidemiological studies on the prevalence of tongue lesions were from countries including United States of America (Shulman and Carpenter, 2006), Iraq (Ghose and Baghday, 1982), Hungary (Bánóczy et al., 1993; Vörös-Balog et al., 2003), Jordan (Darwazeh and Pillai, 1993), Thailand (Jainkittivong and Langlais, 2005) and Turkey (Avcu and Kanli, 2003; Mumcu et al., 2005; Parlak et al., 2006). These reports have enumerated the prevalence of fissured tongue (Aboyans et al., 1993; Bánóczy et al., 1993; Vörös-Balog et al., 2003; Matthews et al., 2008), geographic tongue (van der Waal et al., 1988; Jainkittivong and Langlais, 2005; Parlak et al., 2006; Shulman and Carpenter, 2006), hairy tongue (Kullaa-Mikkonen et al., 1982; Darwazeh and Pillai, 1993), and median rhomboid glossitis (Bánóczy et al., 1993; Pontenero et al., 2006; Matthews et al., 2008). Less well-known are studies on pigmented tongue (Amir et al., 1991), cribrae tongue (Crespo et al., 2005), and ankyloglossia (Ruffoli et al., 2005; Klockars, 2007).

Malaysia, geographically located in the South-East Asian archipelago, is a multiracial multicultural nation with a population of approximately 28 million. According to the Malaysian Department of Statistics, the three main racial groups are the Malays (65.0%), Chinese (26.0%) and Indians (8.0%) (Department of Statistics, Malaysia). The Klang Valley area refers to the capital city, Kuala Lumpur and its suburbs as well as adjoining cities and towns in the state of Selangor. It has a population of approximately 6 million people (Department of Statistics, Malaysia). The Primary Dental Care Unit at the Faculty of Dentistry, University of Malaya is located in the Kuala Lumpur metropolitan area and easily accessible to residents living in the Klang Valley. Earlier oral mucosal surveys reported that 10.7% of