A case-control study of patients with dengue fever associated oral manifestations

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Objectives: Oral-manifestations such as candidiasis are commonly associated with dengue fever but are not well studied. Transient immunosuppression secondary to dengue infection is thought to be an important predisposing factor especially for oral candidiasis. Therefore, in this study we aim to describe various oral manifestations and their predisposing factors in patients with dengue infection.

Method: A case-control study was conducted in Medical and Paediatric wards of Colombo-North Teaching Hospital (CNTH) during a dengue out-break from July to October 2017. Consecutive patients with confirmed dengue infection with oral manifestations (cases) and age-sex matched dengue patients without such manifestations (controls) were recruited into the study. Data were collected using an interviewer-administered questionnaire.

Results: 85 cases (female 57.6%, mean age 29.3±14.5 years) and 85 controls (female 50.6%, mean age 35.7±17.1 years) were studied. Majority of cases, 54 (31.8%) patients developed oral symptoms on day 2 or 3 of the illness and their manifestations were; sore-throat-52 (61.2%), dysphagia-51 (60.0%), odynophagia-21 (24.7%), oral thrush-19 (22.6%), pustules-9 (10.6%), tonsillitis-12 (14.1). Of cases, 38.3% had platelet<100x103/dL, 62.4% had WBC<4,000/dL, 47.1% had neutrophils<2000/dL, 49.5% had SGOT 40-300 IU at the onset of such manifestations. When, cases and controls were compared for possible risk associations, prior antibiotic treatment for the index illness was significantly higher in cases (20%, 0%, p<0.0001); but prior steroid medication (3.5%, 2.4%, p=0.65); diabetes-mellitus (4.7%, 9.4%, p=0.23); underweight (14.1%, 22.4%, p=0.32), past history of oral/vaginal candidiasis (3.5%, 1.2%, p=0.31), dengue hemorrhagic-fever (36.5%, 36.5%, p=1.00) did not show significant differences.

Conclusions: Oral manifestations in patients with dengue fever appear mostly on day 2-3 of illness and sore-throat or dysphagias were the commonest. Prior antibiotic use was significantly associated with such manifestations.

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