

# Mouth and genital ulcerations in the community

*Abdurhman S. Al-Arfaj, FRCPC, FACP, Suliman R. Alballa, FRCPC, Mohammed A. Sekeit, PhD, Salman S. Al-Saleh, FRCPC, Abdulla N. Al-Dalaan, FACR, Sultan A. Bahabri, FRCPC, Mohammed A. Mossa, MRCP.*

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## ABSTRACT

**Objectives:** To estimate the prevalence of mouth and genital ulceration in the community and its relationship to rheumatic diseases.

**Methods:** A house to house survey was carried out over a period of 18 months extending from September 1993 to February 1995, on 5,894 individuals utilizing detailed questionnaires on symptoms of musculoskeletal diseases and associated symptoms including history of mouth, genital ulcers, eye symptoms, and skin changes. After the initial phase, a 2nd phase was completed by trained nurses and paramedical staff, the purpose of which was to explore in detail, the history of those responding positively to any of the questions in phase one. The 3rd stage was conducted by general practitioners and rheumatologist to interview and

examine those identified in phase 2 at King Fahad Hospital, Buraidah, Kingdom of Saudi Arabia.

**Results:** We identified 7 (0.1%) cases of genital ulceration, 43 (0.7%) cases of mouth ulceration, 263 (4.5%) cases of reddish eye or blurred vision, and 124 (2.1%) cases of skin rashes. Only 2 cases had both mouth and genital ulceration in addition to eye disease, skin rash and musculoskeletal pain. There was significant correlation between mouth ulcers and skin rash, eye symptoms, genital ulcerations, male sex, single status, weight loss and backpain.

**Conclusion:** The vast majority of mouth and genital ulcers are not associated with a known rheumatic disease.

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Mouth and genital ulceration are seen in some rheumatic diseases, however, this biased look is not a good reflection of the situation in the general population, since the vast majority of oral and genital ulceration have causes other than rheumatic diseases. Causes of mouth ulcers include local causes (trauma), recurrent simple aphthous ulcerations, malignant neoplasm, drugs, and association with systemic diseases including those of the gastrointestinal tract, infections, and rheumatic diseases.<sup>1,2</sup> Genital ulcerations also have variable causes including trauma, sexually transmitted diseases, human immunodeficiency virus infections, neoplasms, drugs, Behcet's disease and magic syndrome.<sup>3-6</sup> Most of the studies on the subject utilized

materials from sexually transmitted diseases clinics, dental practices or hospital patients, although in the case of oral pathology, community studies were carried out in Cambodia, Malaysia and the largest was carried out in Sweden.<sup>7-9</sup> However, in these studies, the emphasis were on oral pathology other than oral ulcers, since they were carried out by oral surgeons looking for precancerous oral pathology.<sup>7-9</sup>

As part of a survey of rheumatic diseases in the central region of the Kingdom of Saudi Arabia (KSA), we inquired regarding the presence of mouth and genital ulceration in the general population and now reporting its magnitude and its relationship to musculoskeletal conditions.

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From the College of Medicine (Al-Arfaj, Alballa, Sekeit), King Saud University, Department of Medicine (Al-Saleh, Al-Dalaan, Bahabri), King Faisal Specialist Hospital and Research Centre, Riyadh and Department of Medicine (Mossa), King Fahd Hospital, Buraidah, Kingdom of Saudi Arabia.

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Address correspondence and reprint request to: Dr. Abdurhman S. Al-Arfaj, PO Box 34471, Riyadh 11468, Kingdom of Saudi Arabia. Tel. +966 (1) 4672573. Fax. +966 (1) 4672511. E-mail: asarfaj@ksu.edu.sa

**Methods.** We carried out a house to house survey of 1000 household in the Al-Qaseem area, KSA, housing 5,894 persons, 16 years of age and above, over a period of 18 months extending from September 1993 to February 1995. Al-Qaseem province is located in the centre of KSA and has a population of 660,000 according to the 1992 general census with an estimated yearly growth rate of 5%. The survey was divided into 3 phases. The first phase was conducted by trained nurses and paramedical staff and involved administering questionnaires with regards to age, sex, education, occupation, musculoskeletal complaints, past and present diseases, history of eye complaints, genital, oral ulceration, skin rashes, attendance to medical facilities, medications and a complete review of medical history. Those identified as having mouth or genital ulcers were further interviewed in the 2nd stage and more detailed history was asked. The 3rd phase involved medical examination by doctors including rheumatologists at King Fahad Hospital, Buraidah, KSA. The data was subsequently analyzed for the purpose of this part of the study for association between genital, mouth ulcers, eye complaints, musculoskeletal complaints, genitourinary and gastrointestinal complaints. The analysis was carried out utilizing statistical package for social sciences (SPSS) (SPSS Inc., Chicago, Illinois, United States of America).

**Results.** A total of 5,894 above the age of 16 years were questioned. The response was obtained in 5,850 (99.2%). There were 2,676 males and 3,174 females. Their age ranged from 16-99 years with a mean of  $34.1 \pm 15.2$ . Skin rashes were reported by 124 (21%), genital ulcers were reported by 7 individuals (0.1%), mouth ulcers were reported by 43 cases (0.7%), eye symptoms (red eye) was reported in 263 (4.5%) cases. Only 2 cases had history of both genital and oral ulcers (out of 5,850). Twenty-nine out of 43 cases with mouth ulcers had musculoskeletal symptoms while 5 out of 7 patients with genital ulcers had musculoskeletal symptoms. Only 2 cases had mouth, genital ulcer and musculoskeletal pain in the form of backpain. Twenty-two cases out of 48 cases with mouth ulcers had backpain. Eleven cases had mouth ulcers, red or blurred eyes and backpain. Two cases had genital ulcers, mouth ulcers, red or blurred eye and backpain. The diagnosis in those with mouth ulcers were: one case of Reiter's disease and 2 cases of Behcet's syndrome and one case of systemic lupus erythematosus (SLE), while the rest had nonspecific musculoskeletal pain. The diagnosis in those with genital ulcers was: 2 cases of Behcet's disease and 5 nonspecific. The diagnosis in those with red or blurred eyes are: one Reiter's disease, 259 allergic conjunctivitis, and one with allergic conjunctivitis and cervical spondylosis, 2 with Behcet's disease, and one patient had rheumatoid arthritis (although the total number of patients diagnosed as having rheumatoid arthritis in the whole sample was 13 cases). There was a

significant correlation between mouth ulcers and genital ulcers ( $r=0.108$ ), red eye or blurred vision ( $r=0.118$ ), morning stiffness ( $r=0.127$ ), weight loss ( $r=0.152$ ), skin rash ( $r=0.154$ ), the diagnosis of Reiter's disease ( $r=0.144$ ), backpain ( $r=0.078$ ), musculoskeletal pain ( $r=0.086$ ), being single ( $r=0.056$ ) and male sex ( $r=0.021$ ). The correlation between genital ulcers was with mouth ulcer ( $r=0.108$ ), red eye or blurred vision ( $r=0.043$ ), morning stiffness ( $r=0.096$ ), skin rash ( $r=0.174$ ), hair loss ( $r=0.121$ ), genitourinary problems ( $r=0.103$ ), backpain ( $r=0.051$ ), musculoskeletal pain ( $r=0.051$ ), being single ( $r=0.024$ ) and male sex ( $r=0.025$ ). All of the above correlations (Pearson's) were significant at 0.05 level.

**Discussion.** In this community survey, the prevalence of oral ulceration in those aged 16 years and above was estimated to be 0.7%. As would be expected, most of those who have oral ulceration in the general public do not have definite rheumatic disease, despite the complaint of vague musculoskeletal pain in 29 out of the 48 cases of oral ulceration and the complaint of backpain in 11 out of the 48 cases of oral ulceration. Only 4 cases among the 48 cases of oral ulceration could be labeled as having definite rheumatic (one case of Reiter's disease, 2 cases of Behcet's disease and one case of SLE). Our figure of 0.5% is much lower than the figure arrived at, in the Malaysian study, in which they found the prevalence of (9.7%).<sup>8</sup> However, the ages of the participants in that study were older (ages range from 25-115 years) with a mean age of  $44.5 \pm 14.0$ . Our age range was 16-99 years with a mean of  $34.1 \pm 15.16$ . In that study, a lot of participants practiced chewing betel nuts.<sup>8</sup> In Cambodia, oral pathology as a whole and not just ulcers were seen in 4.9%.<sup>7</sup> The age intervals in that study was similar to ours, however, sample included a lot of smokers, alcohol consumers had chewers of betel nut. These habits were instrumental in most of the lesions recorded in that study. That study and the Malaysian study were conducted by an oral surgeon who were looking for oral pathology as a whole and not just mouth ulcers as is the case in ours. These factors and the difference in the population age groups played a role in us having a much lower figure for oral pathology as we did not specifically look for other oral pathology other than oral ulceration pertinent to our specialty as rheumatologists.

In a study carried out on oral ulceration in Sweden, a prevalence of 2% was found.<sup>10</sup> This is still higher than our result of 0.7%. Since our information regarding oral ulcers was obtained through questionnaire. There might have been a problem with patient recall of previous history of mouth ulcers tending to remember only recent events. However, the difference in figures between ours and the Swedish is much less than the difference between the Swedish study (2%) and a study carried out at outpatient clinic in Malaysia and Thailand.<sup>11</sup> Their prevalence for aphtons mouth ulceration was an overwhelming 48.3%.

The situation with genital ulcer prevalence is even more ambiguous. No community based studies of the prevalence of genital ulceration could be found in our literature search, and most of the literature on the topic is originating from sexually transmitted diseases clinics with emphasis on infectious causes. As other reports on genital ulceration comprises reports on cases associated with unusual causes, such as infectious mononucleosis, disseminated histoplasmosis, immunodeficiency or leukemia.<sup>12-15</sup> Rheumatic diseases especially Behcet's disease and Reiter's may present with genital ulcerations. In our survey, we found 2 cases of Behcet's syndrome among the 7 cases of genital ulceration. In this conservative society, there is a reluctance to admit to having genital pathology, which may have reduced the number of cases of genital ulcers recorded in our study. Another factor is that in this religious conservative society, the prevalence of sexually transmitted disease is low and so reducing the incidence of genital pathology. This study shows that oral and genital ulcer as reported by those questioned is low and that rheumatic disease in those who have ulcers are rare.

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