

Human bites of the face

A review of 22 cases

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Objective. To compare experience with human bites of the face in a unit in Harare, Zimbabwe, with other similar studies in respect of reasons for the assaults, age and sex of the patients, timespan between injury and treatment, surgical management and incidence of infection.

Design. Prospective study.

Setting. Department of Oral and Maxillofacial Surgery Outpatients Clinic, Harare Central Hospital, Harare, Zimbabwe.

Patients. Twenty-two consecutive patients with human bites of the face.

Main outcome measures. The black female is the predominant victim and assailant, with the lower lip most commonly involved.

Results. Of the patients 81.8% were female. The mean age was 32.5 years. Interpersonal violence was the commonest cause of the injury, with the lower lip involved in 90.9% of cases. Early presentation reduces the risk of infection.

Conclusion. The results indicate that the black female predominates both as victim and assailant. Early presentation with thorough surgical debridement under antibiotic cover produces satisfactory results.

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Human bites usually occur during quarrels, but they can also occur during the course of sexual activity.^{1,2} The latter form of bite is uncommon in our practice, possibly because kissing as a sign of affection is not as common among black Africans as it is in Caucasians.^{1,3,4}

Human bites of the face are serious injuries, mainly because of the potential for severe wound infection, disability or gross disfigurement.^{3,5,6} The main objectives of management are therefore prevention of infection and functional closure of the wound with the best possible cosmetic result.⁵

The present study in our unit in Harare, Zimbabwe, comprises 22 human bites of the face (defined by Tomasetti *et al.*⁶ as 'one inflicted on a person by another person'). The main aim of the study was to compare the results with other similar studies in respect of incidence of infection, surgical management, age and sex of the patients, cause of the injuries and timespan between injury and treatment.

Patients and methods

A prospective study was carried out on 22 patients with human bites of the face who presented at the Oral and Maxillofacial Unit of Harare Central Hospital, Harare, Zimbabwe, during the period January 1993 - June 1995.

Age and sex of the patients, anatomical sites and extent of the bite, sex of assailant and victim and reasons for the assault, time of presentation to hospital and surgical management with results were studied. These data were compared with other series of human bites of the face.

Results

Clinical details of 22 patients with human bites of the face are discussed. The amount of tissue loss was variable, ranging from a simple mucosal abrasion to loss of the entire thickness of the lip including skin, muscle and mucosa (Fig. 1).



Fig. 1. Deep bite, loss of skin muscle and mucosa.

The study group consisted of 18 females (81.8%) and 4 males (18.2%), giving a female/male ratio of 4.5:1. All patients were black Africans and all were treated on an outpatient basis.

The ages of the patients ranged from 23 years to 45 years (mean 32.5 years). The commonest part of the face bitten was the lower lip (20 patients; 90.9%), with only 2 patients (9.1%) presenting with bites of the ear. No other facial sites were involved.

The average delay in presenting to hospital after having been bitten was 2.6 days (range 1 - 14 days). In 21 cases (95.5%) the injury had been inflicted by a female, and of the victims 18 (81.8%) were female and only 4 (18.2%) male. Love or jealousy had precipitated the attack in 19 cases (86.4%), the commonest situations being girlfriends fighting over a boyfriend (11 cases; 57.8%) and wife and husband fighting over a mistress/girlfriend (5 cases; 26.3%) (Table I). Bites sustained during altercations with other causes accounted for 3 cases (13.6%).

Treatment on presentation consisted of thorough irrigation with povidone-iodine solution and good surgical debridement without sacrificing tissue unnecessarily. This was followed by primary closure. The patient was placed on a full course of

Table I. Cause of the injury (22 cases)

	No.	%
Fights due to love/jealousy	19	86.4
Wife against husband over mistress/girlfriend	5	26.3
Girlfriends over boyfriend	11	57.9
Wife and wife over husband	1	5.3
Girlfriend against boyfriend over neglect	1	5.3
Wife against mistress	1	5.3
Anger (without love/jealousy as cause)	3	13.6
Sexual activity	0	0
Total	22	100

ampicillin 500 mg, having received tetanus prophylaxis from the referring centre. Only one patient had postoperative infection. He had presented 14 days after injury with signs of infection already present. Debridement and irrigation with povidone-iodine was done on presentation and primary closure achieved. Infection became apparent on the 5th postoperative day with partial wound dehiscence in the midline. Further debridement was done and the wound was secondarily closed. Healing was uneventful thereafter.

Table II compares results from the present study with results from other reported series with regard to commonest site of the bite, age, sex and race of the patients, and mode of injury.

Discussion

The epidemiology of mammalian bites has been documented by several authors.¹⁻¹³

Human bites have been considered both as a means of defence and a method of attack.^{3,4} Like other reported series of human bites of the face in black Africans, the present study shows a marked female preponderance both as assailants (95.5%) and victims (81.8%); Venter reports figures of 66.7% female and 33.3% male victims; Muguti *et al.*³ 56% female and 44% male victims (these included bites to other parts of the body) with 61% of assailants female; and Iregbulem⁴ 75% female and 25% male victims. In the latter study, 93.8% of assailants were female. In a series from the USA Marr *et al.*¹¹ report that males exceed females as bite victims in all categories (ratio 1.35:1.0) except the 10 - 20- and 55 - 60-year age groups. Tomasetti *et al.*,⁶ reporting on a total of 25 patients in a primarily black and Hispanic population, notes a male preponderance (68% males, 32% females), as does a study of 41 patients in the UK by Earley and Bardsley⁷ (97.6% males, 2.4% females). It appears that in black African series the female is the predominant assailant and victim, as opposed to black or white American or English populations, where the male predominates.

In the reported series human bites tended to occur most frequently in adolescents and young adults, who are most likely to become involved in physical altercation. The mean age of the victims in our study is higher (32.5 years) than that in the English series⁷ (26.5 years). Our higher mean age is in agreement with the 34 years reported by Muguti *et al.*³ in another African study, conducted in a different Zimbabwean city, Bulawayo. The mean age of black patients at Cecilia Makiwane Hospital reported by Venter⁵ (25 years)

Table II. Human bites of the face — the present study compared with other series (%)

	No. of patients	Commonest site	Female	Male	Cause of injury		Race		Age range (yrs)
					Alter-cations	Sexual activity	Black	White	
Earley and Bardsley ⁷	41	Ear 83% Lower lip 2	2.4	97.6	100	0	2.4	92.7	16 - 51 (mean 26.5)
Tomasetti <i>et al.</i> ⁶	25	Lower lip 32%	32	68	68 (12% cause unknown)	20	100 black and hispanics		17 - 54 (mean not given)
Iregbulem ⁴	16	Lower lip 100%	75	25	100	0		100	12 - 40 (mean not given)
Muguti <i>et al.</i> ³	64 (55 involving the face)	Lower lip 29%	55.6	44.4	Not indicated		100	0	18 - 54 (mean 34 for inpatients)
Venter ⁵	72	Lower lip 43%	66.7	33.3	100	0	100	0	16 - 50 (mean 25)
Present study	22	Lower lip 90.9%	81.8	18.2	100		100	0	23 - 45 (mean 32.5)

is very close to that reported by Earley and Bardsley⁷ in the UK (26.5 years).

Although black African patients tend to be older than their English or American counterparts at the time of injury, age may not be significant. Passion (i.e. sexual activity) does not feature as a factor precipitating human bites of the face in black African series (Muguti *et al.*³ 0%, Iregbulem⁴ 0%), including the present study, in which no bites were attributable to passion. In studies from the West, however, human bites in the course of sexual activity are not uncommon.^{2,6} The difference is probably due to the fact that the custom of kissing as a sign of affection is not particularly common among the black African population.^{3,4} The present study shows that violence between females due to love or jealousy is responsible for a large proportion of bites to the face. The male victims were also involved in fights with females over issues involving love/jealousy.

Previous reports have shown that the lower lip, cheek, nose and ear are the areas most frequently involved in human bites,^{8,9} viz. 12% of bites involved the ear and 44% the lip and cheek.⁷

Tomasetti *et al.*⁶ reported the sites of bites to the face as lip 32%, ear 24%, eyelid 16%, nose 12% and cheek 11%, while in Laskin and Donohue's¹² series of 14 bites, all involved the lips. The present study is in agreement with the above findings in that the lower lip was predominantly involved (90.9%). This was also reported by Muguti *et al.*³ (29%) and Iregbulem⁴ (100%).

The upper lip was not involved in the present study, and only few series have reported bites to this site — Muguti *et al.*³ (5%) and Venter⁵ (7.0%). Iregbulem⁴ believes that trying to bite off the lip is a subconscious effort to attack and thus silence the 'mouthpiece' of the opponent!

The excellent blood supply of the face, use of antibiotics and early surgical repair make infection of human bites of the face a rare occurrence, even when patients seek help at a relatively late stage.^{3,5,7} This finding is supported by the present study, where results were good despite a mean delay in seeking treatment of 2.6 days. The late presentation could be due to long distances our patients had to travel, unwillingness to seek help or embarrassment, or because some of the wounds initially seemed innocuous.

Infection complicated treatment in one patient, who delayed seeking treatment for 14 days. Thorough debridement and primary closure (where possible) with antibiotic cover is generally advocated.

Results similar to ours were obtained by Earley and Bardsley,⁷ in whose study of 41 patients only 1 (2.4%) developed infection, and by Venter,⁵ who studied 44 patients, all of whom had early surgery and only 1 of whom (2.3%) developed infection.

These results clearly indicate that early repair under antibiotic cover is a safe procedure, with the advantages of short hospital stay (or no admissions, as in the present study and that reported by Muguti *et al.*³), low morbidity and good cosmetic results. Late reconstruction is warranted, especially in bites involving loss of part of the ear.

There is a possibility of hepatitis transmission via human bites.^{13,14} Appropriate precautions should also be taken if an individual is bitten by a known HIV carrier, in view of two recently reported cases of suspected AIDS transmission through human bites.^{15,16}

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