Pattern of human bites of the oro-facial region and the indigenous mode of resolution of the resultant conflict: University of Benin Teaching Hospital experience.

Madukwe IU, Obuekwe ON, Ojo MA
Department of Oral Surgery and Pathology
University of Benin, Benin City
Correspondence: **Madukwe IU**
E-mail: madukwe236@yahoo.com

Abstract

Human bite, especially involving the oro-facial region with the attendant aesthetic damage and psychological morbidity, would ordinarily attract legal action. The objective of this report is to present the pattern of human bite of the oro-facial region observed in patient victims at the University of Benin Teaching Hospital and to highlight the contribution of the indigenous mode of resolution of the resultant conflict. In a three year prospective study (2000 - 2003), six cases of oro-facial assault presented. The lower lips was involved in five of the six cases, the upper lip in one case while the nose was involved in one of those involving the lower lip. In all the six cases, there was indigenous social support and no legal action. It is concluded that the traditional support of this concept led to the early peaceful resolution of the conflicts in this community.

Keywords: Human bite, oro-facial region

Introduction

In human bites, studies had been made of the anatomical distribution of these marks by age of victim and type of crime involved. Bite marks are known to occur primarily in sex-related crimes, child abuse cases and cases involving other types of physical altercations[1]. Legal options or otherwise for victims is a product of varying and various factors in a given family in our setting. However oro-facial injuries and bite mark evidence has been admitted in a vast number of cases in courts throughout the United States, as well as other countries of the world. This is made possible because of the variation in human dentition in different individuals; making it feasible and possible to identify the perpetrators of the crime[2]. Quantitative measures of the importance of evidence such as the "likelihood ratio" have become increasingly popular in the court room[3-5]. It is a known fact that human dentition has been increasingly used as a weapon of attack or defence, and are most often seen in clinical setting in the casualty departments where quick and proper recovery of evidence can assist in analyzing these injuries[5].

This study was prospective in a given African setting where the extended family system in Nigeria permits the co-habitation of different and or multiple partners in a given domestic setting. Pedigree is the prime determinant of this setting. Norms and values are inextricable products of ancestral lineage. In a patrilineal setting like ours, brides adjust to status quo. This domestic setting may be an amalgam of polygamy and monogamy, as polyandry has not been documented. Anecdotal findings reveal polyandry as a taboo. This pluralistic setting of multiple nuclear families, by extension implies cohabitation of people with different moods, mannerism and temperament with common ancestral linage as bond.

Intentionally inflicted injuries especially in the facial region has negative psychological effect as a result of aesthetic damage, which may necessitate redress in a court of law[8]. Such medico-legal matters and their implications are in the realm of forensic odontology, and the attending physician may need to give evidence in court. Moreover when the injury results from bite marks its medico legal importance could not be wished away as the impression of bite marks like tattoos, DNA, lip prints, gelatinase A., and deoxypyridinoline crosslinks are useful tools in assailants identification [9 - 12]. Disagreement is an obstinate reality in any given social setting in both developed and developing countries. Mismanagement of such disagreements may result in conflict or outright violence. What is unarguable is that the domestic African setting is endowed with well spelt out traditional norms in conflict resolution. Cultural hybridization or frank imperialistic incursion brought in its wake a mixed approach to seeking redress when assaulted. In the rural community, legal options are usually remote, as against the municipal setting. Even in the municipality, the core adherents to traditional norms view legal option as an aberration, disdainful and utter disregard to status quo. With the ever-increasing literacy level in this part of the world, caution demands that the obstinate reality of today's setting in conflict resolution may be tomorrow's fallacy.

The objective of this reports is to present the pattern of human bite of the oro-facial region which presented at the University of Benin Teaching Hospital and to highlight the positive contributions or otherwise of the traditional conflict resolution as seen in these otherwise actionable six cases.

Case Reports

Bite injuries presenting in the Department of Oral Surgery and Pathology of the University of Benin Teaching Hospital between 2000-2003 were documented. Information and data were by interviews and clinical history from patients and relatives and pre-operative photographs taken with the consent of the patients. Data included age, gender, anatomical site of the bite, victims relationship to the assailant and information on police involvement.

Table 1 Summary of the pooled data from the six reported cases

S/N	Age	Sex	Site	Relationship to assailant	Police Involve
1	48	F	Lip/check(lower)	Co-wife (polygamous setting)	Nil
2	25	F	Lip (lower)	Husband's mistress	Nil
3	45	F	Lip (lower)	Husband	Nil
4	37	M	Lip (upper)	None (separating a fight)	Nil
5	50	F	Lip (lower)	Co-wife (polygamous setting)	Nil
6	26	M	Nose/lip (lower)	Sister-in-law	Nil

Case 1:
A 48 year old female presented at the University of Benin Teaching Hospital maxillofacial centre, with complete resection of the lower lip from the midline, beyond the modiolus to the lower anterior buccinator up to the canine line on the left (Figures. 1a & 1b). This is a non-accidental injury inflicted by a co-wife in a polygamous setting over an undisclosed disagreement that degenerated to outright conflict and assault. However, resolution followed the traditional format as confirmed by the presence of both the assailant and the entire family in the clinic to render both material and social support to the victim. Management was by surgical repair.

Case 2:
A 25 year old female presented at the same centre. There was a mid-segment resection of the lower lip, more on the right than the left (Figure 2). It was equally a non-accidental injury inflicted by the husband's mistress. Resolution followed the traditional trend as confirmed by the husband's presence in the clinic and other family members to render both material and social support to the victim. Management was conservative .

Figure 1a: Lateral view of bite of lower lip

Case 3:
A 45 year old female was seen in this centre with a mid-segment resection of the lower lip, more on the left in this case than the right, and marked avulsion of the vermillion border (Figure 3). The assailant in this case was the husband, who brought her to the clinic for treatment. Further enquiries revealed complete resolution of vexations issues, as the presence of family members confirmed this. Management was conservative.

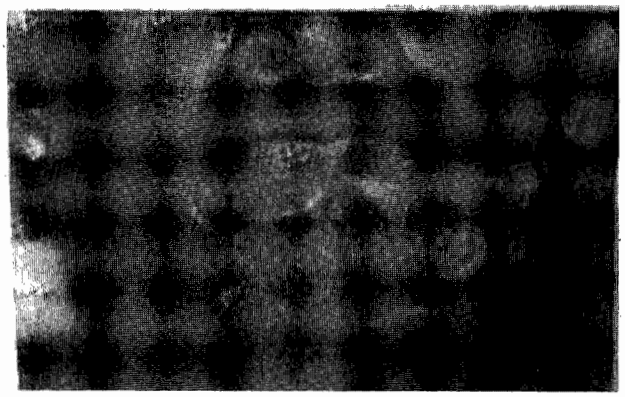

Figure 1b: Posterior - anterior view of same patient in Figure 1a

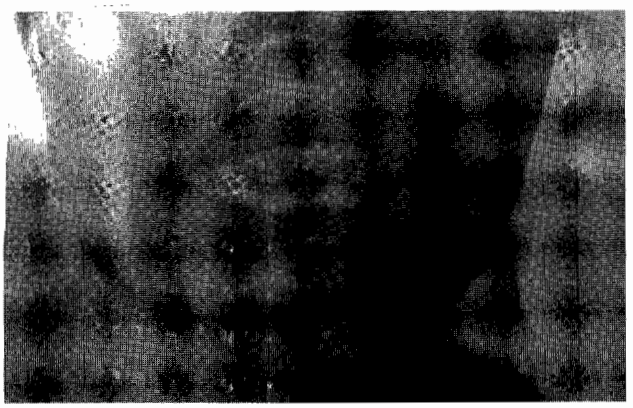

Figure 2: Anterior view of bite of lower lip

Case 4:
A 36 year old male passerby separating a fight in a polygamous compound had his upper lip excised (Figure 4). The assailant claimed unfairness on the part of the victim in the process of separating them from fighting. The excision of the upper lip was near total leaving bilateral stumps. However, the presence of both families in the clinic confirmed settlement by traditional format.

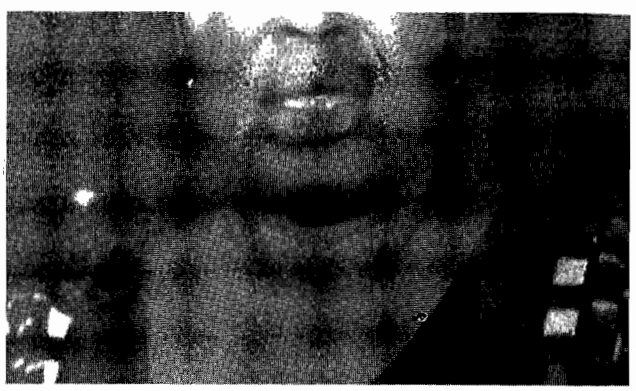

Figure 3: Anterior view of bite of lower lip

Case 5:
A 50 year old female, with complete resection of the lower lip from the midline to near the modiolus on the left (Figure 5). The assailant is a co-wife in a polygamous setting for an undisclosed disagreement. Again resolution was in the traditional method, as friends and family members, even the assailant were in the clinic for support. Management was by surgical repair.

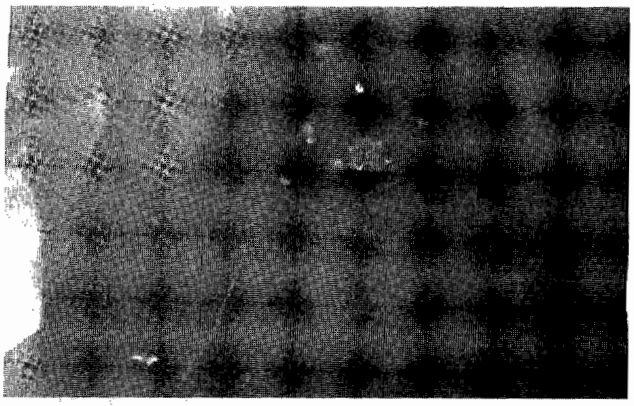

Figure 4: Anterior view of bite of upper lip

Case 6:
A 26 year old male with multiple bites, inflicted by the sister-in-law over a classified offence. The alar of the right nares was almost completely removed and another bite on the right lower lip from the cupid line upward to the vermillion middle one-third (Fig. 6).The first bite on the nares was complete. While the second on the lower lip was a superficial laceration. Again both families confirmed resolution by traditional format as exemplified by their presence in the clinic. Management was conservative.

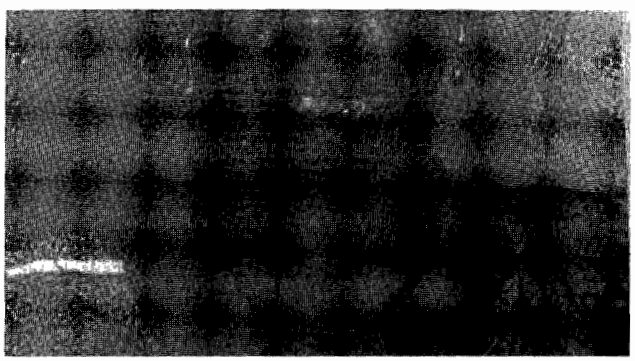

Figure 5: Anterior view of bite of lower lip

Discussion

Bitemarks in forensic dentistry and in a person's identification is important in criminology. Forensic odontologists are key personnel for identifying an individual's dentition which could cause a bitemark and which could be used to convict or exculpate a suspect[6]. This therefore can espouse the rules that control the acceptance or rejection of expert witness testimony[7]. Most bite cases especially in the oro-facial areas go to the Police before presenting for treatment in the hospital

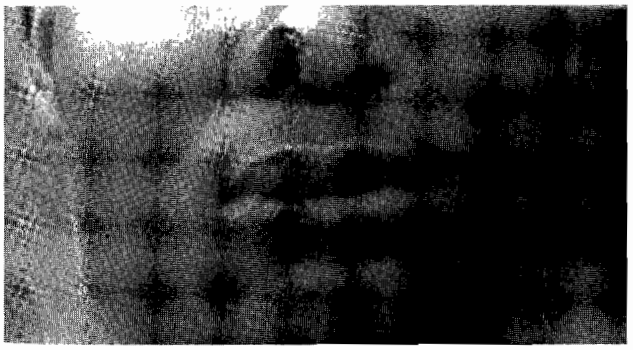

Figure 6: Anterior view of bite of lower lip and right side of nose

because of the deforming nature of the assault. The six cases presented in this paper on the other hand came for treatment of the wound and entirely excluded the police due to family intervention. In this study setting, bites are common especially in all parts of the body and are usually attended to in different specialties but damaging bites with immediate resolution and early presentation for clinical management excluding the police is not common. Hence the interest in the health care outcome of these six cases. In these cases, female were more affected. The commonest site of attack was the lower lip. Out of the 6 victims; 5 were attacked on the lower lip and 1 on the upper lip. In the sixth case part of the alar of the nose was affected.

In developed countries, the six cases are actionable and the social and cultural setting in that environment does not permit polygamy. In the event of domestic violence of this magnitude, multiple interest groups will set legal process in motion for redress. In some settings, social welfare will play a prominent role.

However, what was unique in these six cases was, early presentation for clinical management without police delay, the concepts of indigenous social support and the concept of traditional format for conflict resolution, which has helped to reduce court congestion in this study setting.

The concept of indigenous social support in Africa entails material and moral support in health and illness. Extended families and relatives gather in health (as in marriages, birthdays, anniversaries) and in ill-health (death hospitalization, accidents, burial). This social support plays a very vital role in our culture. Issues and problems are viewed as collective responsibility. Lack of cultural indigenous social support system in developed world gave birth to their social welfare system. In the six cases, both families were visible in the clinic to render social support.

The concept of traditional conflict resolution in our culture demands the intervention of extended families in conflict situation. In conflict within a nuclear family, extended members of the families are invited. Legal options are not the prime choice and more often, matters end at this level. Sometimes, matters may extend to the traditional rulers.

Every society therefore has various means of regulating disputes among its own members and between it and other societies. Whether it is a case judged by village elders or an international court, the basic principles remain the same: an aggrieved party brings a complaint and the case is argued before the people whose role it is to decide who is right or wrong. These judges or arbiters have authority and credibility to make their decisions acceptable by all involved. In the traditional setting, most of these decisions

are not queried and are equally backed with traditional social support, with the firm belief that conflict resolution is meant to change attitude and perceptions of disputants.
In the six cases under study this mode of settlement was at play and no legal process was used. We believe that the peaceful resolution of these cases early in the course of the tragedy boosted the psychological makeup of our patients and enhanced their immunity to quick recovery.
Our findings revealed that the commonest site of attack is the lower lip. The health care out come revealed a quick recovery. This report therefore highlights the need to re-examine and strengthen the concept of indigenous social support as a psychological boost to patients during management in our environment with limited financial resources. The material and moral support offered by the indigenous social support system through family participation in times of need is most welcome. We therefore recommend a reappraisal of this concept as an adjunct to total patient care. This will encourage a multilateral input in our health care delivery system.

References

1. Vale GL, Noguchi TT. Anatomical distribution of human bite marks in a series of 67 cases. Forensic Sci 1983; 28: 61 -69.
2. Sperber ND. Bite marks, Oral and Facial injuries harbingers of severe child abuse? Pediatrician 1989; 16: 207 - 211.
3. Kittelson JM, Kieser JA, Buckingham DM, Herbison GP. Weighing evidence: quantitative Measures of the importance of bite mark evidence. Forensic Odontostomatol 2002; 20: 31 - 37.
4. Van Dijk EA. Bite mark analysis. Part 2. A Selection of Dutch cases. Ned Tijdschr Tandheelkd 1995; 102: 224 -227.
5. De Valck E. Bite mark analysis. Part 1. Methods and overview. Ned Tijdschr Tandheelkd 1995; 102: 221-223.
6. Fischman SL. Bite Marks. Alpha Omega 2002; 95: 42-46.
7. Pretty IA, Hall RC. Forensic Dentistry and human bite marks; Issues for Doctors. Hosp Med 2002; 63: 476-482.
8. Agrawal K, Mishra S, Panda KN. Primary reconstruction of major human bites wounds of the face. Plast Recontr Surg 1992; 90: 394-398
9. BrKic H, Strinovic D, Kubat M, Petrovecki V. Odontological identification of human remains from mass grave in Croatia. Int J Legal Med 2000; 114: 19-22.
10. Martin-De Las Heras S, Valenzuela A, Overal CM The Matrix mateloproteinase gelatinase A in human dentine. Arch Oral Biol 2000; 45: 757-765.
11. Segui MA, Feucht MM, Ponce A C, Pascual F A Persistent lipsticks and their lip prints: new hidden evidence at the crime scene, Forensic Sci Int 2000; 112: 41-47
12. Martin-De Las Heras S, Valenzuela A, Villanueva E. Deoxypyridinoline cross links in human dentin and estimation of age. Int J Legal Med 1999; 112: 222-226.
13. Atsu SS, Gokdemir K, Kedici PC, Ikyaz YY. Bitemarks in forensic odontology. J Forensic Odontostomatol 1998; 16: 30-34.
14. Bowers CM. Jurisprudence issue in forensic odontology. Dent Clin North Am 2001; 45: 399-415.