

Love Bites or Monkey Bites: A Medical Trauma of a Kind

Sachi Sri Kantha

ABSTRACT

Objective: An update on medical trauma caused by love bites, including a few case reports omitted by Al Fallouji (in his 1990 review on traumatic love bites or monkey bites which appeared in the *British Journal of Surgery*) is presented.

Methods: Published surveys in sexuality books and reports in medical journals on love bites were studied.

Results: Based on original papers, reviews and case reports, I classify four types of love bites, which can result under the following four circumstances: (1) during consensual sex play (between willing partners), (2) a combination act of consensual sex sliding into sex aggression (between willing partners), (3) during aggression by a sex offender (one individual showing aggression against a powerless victim, including clinical vampirism), (4) self-biting of a body part due to aggravating psychiatric condition in an individual. Trauma grades of these four types of love bites are also identified.

Conclusion: Though antimicrobial therapy for human bites do exist, many love bite injuries do not receive proper care from health personnel due to factors like victim embarrassment, negotiated quasi-resolution of conflict between the victim and aggressor, as well as fear of legal repercussions.

KEY WORDS

bite-marks, criminality, hickey, infection, sexual aggression, teeth

INTRODUCTION

In 1967, a popular melody sung by Yukari Ito 小指の思い出

あなたが囁んだ 小指が痛い
きのうの夜の 小指が痛い
そっとくちびる 押しあてて
あなたのことを しのんでみるの
私を どうぞ ひとりにしてね
きのうの夜の 小指が痛い

[The little finger you bit is painful]
[Last night's little finger is painful]
[Secretly the lips closets it]
[About yourself, I do endure]
[Will you please leave me alone]
[Last night's little finger is painful]

あなたが囁んだ 小指がもえる
ひとりしていると 小指がもえる
そんな秘密を知ったのは あなたのせいよ
いけない人ね
そのくせすぐに 逢いたくなるの
ひとりしていると 小指がもえる

[The little finger you bit is burning]
[When being alone, little finger is burning]
[I know this secret because of you]
[Why I have to be placed in this situation?]
[Nevertheless, I yearn to meet you]
[When being alone, little finger is burning]

あなたが囁んだ 小指が好きよ
かくしていたい 小指が好きよ
誰でもいいの 何もかも
私の恋を 教えてみたい
ほんとにだけど 言えないものね
かくしていたい 小指が好きよ

[I love the little finger you bit]
[Hiding it - love the little finger]
[Whoever it is - everything it is]
[I'd love to show my love]
[In reality, I cannot say this]
[Hiding it - I love the little finger]

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Center for General Education, Gifu University
1-1 Yanagido, Gifu City 501-1193, Japan
Correspondence to: Sachi Sri Kantha
(e-mail: srikanth@gifu-u.ac.jp)

Table 1. Classification of Love Bites

Type	Typical Pattern	Participant(s)	Love Bite	Trauma Grade
Type 1	consensual sex play	both partners	suction type	minor
Type 2	consensual sex play, sliding into sexual aggression	both partners	suction + biting	medium - major
Type 3	sexual aggression (hetero-aggression)	solo act by aggressor	abusive biting	medium - major
Type 4	self-biting (auto-aggression)	solo act by patient	pathological	medium-major biting

The standard dictionary definition of a 'love bite' as 'a temporary red mark on a person's skin caused by a lover biting or sucking it as a sexual act; a hickey⁽¹⁾ is rather vague with respect to the regions bitten as well as medical trauma it can cause. The 'skin' damage can occur in the neck or other equally sensitive region of the body (such as lips, ears, breasts, thighs, and genitals) due to biting and sucking during sexual play between partners. In serious cases, the damage to skin and soft tissues can be permanent as well if it remains unattended. Other common words for the same behavior which leads to minor or major medical trauma include, hickey/hicky/ hickie, monkey bite, kiss mark, love nips, and love mark⁽²⁻⁴⁾.

The *Kama Sutra*, the 4th century Indian manual of love making authored by Mallinaga or Mrillana aka Vatsyayana, even includes a chapter on 8 types of bites in 43 Sanskrit verses^(5,6). These include, hidden bite, swollen bite, point, line of points, coral and the jewel, line of jewels, broken cloud and biting of the boar. Opinions do vary among behavioral scientists on the functional significance of love bites. While some therapists consider them as a mild and innocent form of sadomasochism among consenting adults, others view them as deeply rooted unconscious drives which relate pain to pleasure⁽⁷⁾.

Love bites of varied behavior during courtship have been reported in invertebrates (such as fang use in wolf spider⁽⁸⁾, sexual cannibalism in garden spider⁽⁹⁾ and redback spider⁽¹⁰⁾ as well as love darts in garden snail⁽¹¹⁾) and vertebrates (fish, lizard and a wide range of mammals including monkeys, apes and humans^(12,13)). Ford and Beach⁽¹²⁾ had observed, "It is not an exaggeration to state that physically aggressive behavior forms an integral part of the sexual pattern for vertebrates of every major phyletic class, although it does not follow that this is true of every species." The repertoire of human sexual behavior includes, "In addition to kissing, licking and sucking, the mouth is also applied to various regions of the partner's body in a biting action of varying intensities⁽¹⁴⁾. Typically this involves no more than soft nibbling of the skin, or gentle nipping, but it can sometimes develop into forceful or even painful biting⁽¹⁵⁾, according to Desmond Morris.

I restrict this review only to bites between human individuals, as occasionally and randomly recorded in medical journals. As 25 years had passed since Al Fallouji⁽¹⁶⁾ reviewed the previous literature on love bites since 1910 and presented 7 cases, I provide an update on this variety medical trauma, including a few case reports omitted by him. Bite-mark studies, restricted to love bites in particular, are of interest to multiple disciplines such as forensic science, criminology, sexuality, dentistry, infectious diseases, pathology, plastic surgery and emergency medicine.

METHOD

Published surveys in sexuality books and reports in medical journals (reviews, original articles and case reports) on love bites were gathered from Medline and other commercial databases.

Table 2. Reported Studies on Love Bites in Medical Literature

Report Type	Case Details	Reference
Review	Epidemiological study of 892 human bite reports, New York City, USA	Marr <i>et al.</i> ²¹
Review	Anatomical distribution of 92 bite mark investigations, Los Angeles County, USA	Vale & Noguchi ²²
original paper	7 cases (out of 7), Belfast, UK	Al Fallouji ¹⁶
original paper	5 cases (out of 25), USA	Tomasetti <i>et al.</i> ²³
original paper	5 cases (out of 5), San Francisco, USA	Wolf <i>et al.</i> ²⁴
original paper	1 case (out of 34), Birmingham, UK	Goon <i>et al.</i> ²⁵
original paper	3 cases (out of 17), Nigeria	Aluko-Olokun <i>et al.</i> ¹⁶
case report	1 case, Paris, France	Carydakos <i>et al.</i> ²⁷
case report	1 case, Virginia, USA	Del Rosario <i>et al.</i> ²⁸
case report	1 case, South Carolina, USA	Khajotia & Lee ²⁹
case report	1 case, Dusseldorf, Germany	Lackmann <i>et al.</i> ³⁰
case report	1 case, Liverpool, UK	John <i>et al.</i> ³¹
case report	1 case, Auckland, New Zealand	Wu <i>et al.</i> ³²
case report	1 case, Denmark	Olsen <i>et al.</i> ³³

RESULTS

I provide the following arbitrary classification on love bites, which can result under the following four circumstances (Table 1).

Type 1: during consensual sex play (between willing partners)

Type 2: a combination act of consensual sex play sliding into sexual aggression (between willing partners)

Type 3: during aggression by a sex offender (one individual showing aggression against a powerless victim, including clinical vampirism)

Type 4: auto-aggression in a body part due to aggravating psychiatric condition in an individual.

Type 1 may result in a minor trauma resulting in petechial bruising in finger, cheek, lips, neck or breast region, and do not require medical attention. The standard dictionary definition of love bite⁽¹⁾ relates particularly to Type 1. But, other three types (Type 2, Type 3 and Type 4) deserve equal recognition because these may lead to medium or major grade of trauma and infection, which require medical attention. Type 2 is best illustrated in a journal entry by American poet Sylvia Plath (1932-1963), when she met her future husband and British poet Ted Hughes (1930-1998) on Feb.25, 1956. As Plath had recorded in her diary, "*then he kissed me bang smash on the mouth and ripped my hair band off, my lovely red hairband scarf which had weathered the sun and much love, and whose like I shall never again find, and my favorite silver earrings; hah, I shall keep, he barked. And when he kissed my neck I bit him long and hard on the cheek, and when we came out of the room, blood was running down his face*"⁽¹⁷⁾.

It should be emphasized that, in Type 3 of love bites, the aggressor is the one who indulges in love bites⁽¹⁸⁻²⁰⁾. The victims could be strangers (e.g. sex workers)⁽¹⁸⁾, juveniles in correction facilities⁽¹⁹⁾ or wives/girl-friends⁽²⁰⁾. The victims, in turn, may occasionally bite the aggressor in a defensive action, which deserves exclusion from love bite category.

Table 2 provides a compilation of reported studies on love bites in the surveyed medical literature. I could locate two reviews^(21,22), five original papers^(16,23-26) and seven case reports⁽²⁷⁻³³⁾. Most prominent body regions in which love bites are placed in soft tissues such as neck, cheek, lip, breast and nipple, fore arm, upper arm and genital organs (penis, vulva)^(14,16-33). Depending on the intensity of the bites, trauma can be either of minor type (suction type mark, characterized by a small area of petechial bruising in neck or breast region) or a major type (aggressive biting mark, easily identified by teeth imprints on the skin^(14,34)). Traumatic love bites result in neck cellulitis, abscesses in neck and breast, nipple avulsion, venous bleeding from the neck^(35,36). Table 3 provides details on the imprint of Bite-Marks in Humans from Different Teeth⁽³⁷⁾.

Table 3. Imprint of Bite-Marks in Humans from Different Teeth

Teeth	Total number in a jaw	Pattern Imprint of Bite-Marks*
Incisor(cutting teeth)	4	elongated, rectangular
Canines (cuspid)	2	triangular
Premolars (bicuspid)	4	smaller and more variable types: diamond shape, single triangle, double triangle
Molars (millstone teeth)	6	rarely an imprint is made; if found, broad and rectangular

*partially adapted from Morse²⁷

DISCUSSION

The observations on love bite by pioneer sex researchers Kinsey *et al.*¹³⁾ is of some relevance here. Two paragraphs from their 1953 book, *Sexual Behavior in the Human Female*, are reproduced below:

"It is difficult to know how much of the response of an individual who is being hurt is the product of the physical stimulation, and how much is the product of the stimulation provided by psychologic conditioning, the association of sexual and sado-masochistic phenomena, and the psychologic satisfactions which are to be found in submitting to a sexual partner. It is also very difficult to determine how many of the physical and emotional responses which are manifest in a sado-masochistic situation are sexual and how many are more properly identified as same sort of emotional response.

During heterosexual petting and coitus, and in homosexual relations, the most frequent manifestation of sado-masochistic responses is to be found in the nibbling and biting which many persons inflict on various parts of the body of a sexual partner. Such behavior is widespread in human sexual patterns than most persons comprehend. Definitely sexual responses consequent on such biting were recognized by about equal numbers of the males and females in our sample. Twice as many males had responded erotically to being bitten as had responded to sado-masochistic stories. There were more than four times as many females who had responded erotically when they were bitten as had ever responded to sado-masochistic stories. This provides one more body of data to show that males may be aroused by both physical and psychologic stimuli, while a larger number of the females, although not all of them, may be aroused only by physical stimuli"¹³⁾.

Among a sample of 2,200 women and 567 men, Kinsey *et al.*¹³⁾ reported that, (1) 26% of both women and men reported definite *and/or* frequent erotic response, (2) 29% of women and 24% of men reported some response, and (3) 45% of women and 50% of men reported no response to being bitten by their sexual partner. Forty years later, Reinsch and Beasley³⁸⁾ representing the Kinsey Institute, had noted, 'One survey reported that 44 percent of men and 41 percent of women found love bites arousing to receive gentle bites.' Unfortunately, sample number as well as other details relating to the reliability of this survey were missing. In his celebrated sex manual, physician Alex Comfort (1920-2000) opined, 'Women tend to bite more often than men, perhaps because they enjoy being bitten more than men do'³⁹⁾. Observations of neuropsychiatrist Amoroso⁴⁰⁾ in a French sample of 16,000 individuals do offer support as follows: 'During pre-coital caresses, men's breasts are sought out by some women, especially those with strong homosexual tendencies...I have on occasion listened to the complaints of men whose breasts had suffered formidable bites which required bandages and antiseptics, and I once had a patient who was obsessed by the idea that prolonged sucking in that area was going to give him cancer of the breast!'

The primary problem with love bites is that all the reports are of retrospective variety. For ethical reason, prospective studies cannot be conducted. Two case reports of self-inflicted wounds in children^{30,31)} (Table 2) have also appeared under the title, 'Love bites though John *et al.*³¹⁾ do mention that 'Love bite' is a misnomer in their reported case of a 10 - year old boy who had bruises in his upper arms. Lackmann *et al.*³⁰⁾ had discussed their reported case of a 8 - year old girl with bruises in fore arm as auto-aggressive and self-mutilating behavior.

The report by Wolf *et al.*²⁴⁾ reporting bites to penis is a curiosity,

though they don't identify these bites specifically as love bites. They presented 5 cases of young men (aged 22 to 34 years), all homosexuals with a history of intravenous drug abuse and four among the 5 were seropositive for HIV or at risk for HIV infection. Considering the background information provided, it becomes unimaginable to infer that the bites suffered by the victims to their penises are anything but love bites.

Reviews of human and animal bite wound infections unanimously state that human bites are more serious than animal (dog, cat venomous snake, exotic pets such as monkey, large mammal, bird) bites^{34, 41-44)}. Disease transmission such as herpes simplex virus²⁵⁾ and human immunodeficiency virus²⁹⁾ to two male victims of love bite by their girl-friend and a call girl (sex worker) indicate that even if hickey or deep kissing are milder forms of sex play, disease virus can be passed through saliva.

Though clinical vampirism include a nasty form of love bite by humans involving blood ingestion and necrophilic acts^{37,45-47)}, I refrain touching on the vampirism as myth, legend, and clinical condition, as quite a number of reports continue to appear frequently on this theme⁴⁸⁻⁵⁴⁾, and I subscribe to the view of Prins⁴⁷⁾ that vampirism is unlikely to constitute a single clinical identity. In this context, views of Zillmann⁵⁵⁾ on links between sex and aggression during pre-coital and coital acts deserve recognition too.

CONCLUSION

In conclusion, methodological challenges in gathering accurate data on measuring sexual behavior⁵⁶⁾ such as love bites (especially Type 1 and Type 2) are not easy to tackle. Though antimicrobial therapy for human bites do exist^{34,57)}, it may not be incorrect to infer that many love bite injuries do not receive proper care from health personnel due to factors like embarrassed victim, negotiated quasi-resolution of conflict between the victim and aggressor, as well as fear of legal repercussions. Another plausible reason could be, psychologically the victim may find a love bite (if it's not life threatening or esthetically displeasing) as a 'treasured gift' from his or her sexual partner, as expressed Yukari Ito's 1967 song, '*Ko yubi no omoide*'.

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REFERENCES

- Jewell EJ, Abate F. (eds.) *The New Oxford American Dictionary*, Oxford University Press, New York, 2001, p. 1011.
- Spears RA. *Slang and Euphemism*, New American Library, New York, 1982, p. 267.
- Gillette PJ. *The Complete Sex Dictionary*, Award Books, New York, 1969, p. 110.
- Usher A. Sexual violence. *Forensic Sci* 1975; 5: 243-255.
- Vatsyayana. *The Kama Sutra of Vatsyayana*, translated by Richard F. Burton, Connoisseur Publishing Co, Cleveland, n.d. (originally publ. in 1883), pp. 60-63.
- Vatsyayana. *The Complete Kama Sutra*, translated by Alain Danielou, Park Street Press, Rochester, Vermont, 1994, pp. 139-144.
- Janus SS, Janus CL. *The Janus Report on Sexual Behavior*, John Wiley & Sons, New York, 1993, p. 110.
- Johns JL, Roberts JA, Clark DL, Uetz GW. Love bites: male fang use during coercive mating in wolf spiders. *Behav Ecol Sociobiol* 2009; 64: 13-18.
- Elgar MA, Nashi DR. Sexual cannibalism in the garden spider *Araneus diadematus*. *Anim Behav* 1988; 36: 1511-1517.
- Andrade MCB. Sexual selection for male sacrifice in the Australian redback spider. *Science* 1996; 271: 70-72.
- Pomiankowski A, Reguera P. The point of love. *Trend Ecol Evol* 2001; 16(10): 533-534.
- Ford CS, Beach FA. *Patterns of Sexual Behavior*, Perennial Library, New York, 1970 (originally publ. in 1950), pp. 65-74.
- Kinsey AC, Pomeroy WB, Martin CE, Gebhard PH. *Sexual Behavior in the Human*

- Female*, W.B.Saunders Co., Philadelphia, 1953, pp. 677-678.
- 14) Dinkel EH Jr, Captain MS. The use of bit mark evidence as an investigative aid. *J Forensic Sci* 1974; 19: 535-547.
 - 15) Morris D. *The Naked Ape*, Corgi Books, London, 1972 (originally publ. in 1967), p. 47.
 - 16) Al Fallouji M. Traumatic love bites. *Br J Surg* 1990; 77: 100-101.
 - 17) King S. Today's Story February 26, 1956, Sylvia Plath & Ted Hughes. http://www.todayinliterature.com/stories.asp?Event_Date=2/26/1956. (accessed Nov. 2, 2015).
 - 18) Van Hecke W. Comments on a bite on a breast in a murder case. *Med Sci Law* 1966; 6: 47.
 - 19) Rawson RD, Koot A, Martin C, Jackson J, Novosel S, Richardson A, Bender T. Incidence of bite marks in a selected juvenile population: a preliminary report. *J Forensic Sci* 1984; 29(1): 254-259.
 - 20) Warren JI, Hazelwood RR. Relational patterns associated with sexual sadism: a study of 20 wives and girlfriends. *J Fam Viol* 2002; 17(1): 75-89.
 - 21) Marr JS, Beck AM, Lugo JA Jr. An epidemiologic study of the human bite. *Pub Health Rep* 1979; 94(6): 514-521.
 - 22) Vale GL, Noguchi TT. Anatomical distribution of human bite marks in a series of 67 cases. *J Forensic Sci* 1983; 28(1): 61-69.
 - 23) Tomasetti BJ, Walker L, Gormley MB, Berger J, Gold BD. Human bites of the face. *J Oral Surg* 1979; 37: 565-568.
 - 24) Wolf JS Jr, Gomez R, McAninch JW. Human bites to the penis. *J Urol* 1992; 147: 1265-1267.
 - 25) Goon PKY, Mahmoud M, Rajaratnam V. Hand trauma pitfalls: a retrospective study of fight bites. *Eur J Trauma Emerg Surg* 2008; 34(2): 135-140.
 - 26) Aluko-Olokun B, Mike-Ogiasa RI, Olaitan AA, Aluko-Olokun OA. Predisposing factors, clinical presentation and outcome of treatment of avulsive human bites on the face: a case series analysis from Abuja, Nigeria. *Eur J Plast Surg* 2014; 37: 523-528.
 - 27) Carydakis C, L'Isle-Boudon RB de, Baulac M, Laplane D. Une cause inhabituelle de traumatisme du nerf spinal La morsure amoureuse. [An unusual cause of spinal nerve injury - a love bite] *Presse Medicale* 1985; 14(20): 1152. (in French)
 - 28) Del Rosario NC, Blair E, Rickman L. A herpetic hickey. *New Engl J Med* 1987; 317: 54-55.
 - 29) Khajotia RR, Lee E. Transmission of human immunodeficiency virus through saliva after a lip bite. *Arch Intern Med* 1997; 157: 1901.
 - 30) Lackmann GM, Niehues T, Kamp G, Lenard HG. Love-bites on the forearm. *Dermatology* 2001; 202: 75-76.
 - 31) John CM, Fazakerley M, Sills J. 'Love bites' - an unusual cause of bruising! *Acta Padiatr* 2009; 98: 1078.
 - 32) Wu TY, Hsiao J, Wong EH. Love bites an unusual cause of blunt internal carotid artery injury. *New Zealand Med J* 2010; 123: 112-115.
 - 33) Olsen S, Damhave LR, Kondziella D, Wojtek P. [Love bite on the neck resulted in an embolic stroke]. *Ugeskr Laeger* 2014; 176(50): pii. (in Danish)
 - 34) Myers JP. Bite wound infections. *Curr Infect Disease Reports* 2003; 5: 416-425.
 - 35) Crane J. Interpretation of non-genital injuries in sexual assault. *Best Pract & Res Clin Obstet Gynecol* 2013; 27: 103-111.
 - 36) Banerjee A. Coital emergencies. *Postgrad Med J* 1996; 72: 653-656.
 - 37) Morse DR. The stressful kiss: a biopsychosocial evaluation of the origins, evolution, and societal significance of vampirism. *Stress Med* 1993; 9: 181-199.
 - 38) Reinisch JM, Beasley R. *The Kinsey Institute New Report on Sex*, St. Martin's Paperbacks, New York, 1994, pp. 141-142.
 - 39) Comfort A. *The Joy of Sex*, Pocket Books, New York, 1987 (originally publ. 1972), pp. 152-153.
 - 40) Amoroso H. *Sexual Behavior and Customs of the French*, Macfadden-Bartell Corporation, New York, 1965, pp. 36-37. (translated from French text)
 - 41) Goldstein EJC, Citron DM, Wield B, Blachman, Sutter VL, Miller TA, Finegold SM. Bacteriology of human and animal bite wounds. *J Clin Microbiol* 1978; 8(6): 667-672.
 - 42) Goldstein EJC. Bite wounds and infection. *Clin Infect Dis* 1992; 14(3): 633-638.
 - 43) Smith PF, Meadowcroft AM, May DB. Treating mammalian bite wounds. *J Clin Pharm Therap* 2000; 25: 85-99.
 - 44) Brook I. Management of human and animal bite wound infection: an overview. *Curr Infect Disease Reports* 2009; 11: 389-395.
 - 45) Hemphill RE, Zabow T. Clinical vampirism: a presentation of 3 cases and a re-evaluation of Heigh, the 'acid-bath murderer'. *South Afr Med J* 1983; 63: 278-281.
 - 46) Prins H. Vampirism - Legendary or clinical phenomenon? *Med Sci Law* 1984; 24(4): 283-293.
 - 47) Prins H. Vampirism - a clinical condition. *Br J Psychiat* 1985; 146: 666-668.
 - 48) McCully RS. Vampirism: Historical perspective and underlying process in relation to a case of auto-vampirism. *J Nerv Ment Dis* 1964; 139: 440-452.
 - 49) Heick A. Prince Dracula, rabies and the vampire legend. *Ann Int Med* 1992; 117: 172-173.
 - 50) Cox AM. Porphyria and vampirism: another myth in the making. *Postgrad Med J* 1995; 71: 643-644.
 - 51) Hampl JS, Hampl WS III. Pellagra and the origin of a myth: evidence from European literature and folklore. *J Roy Soc Med* 1997; 90: 636-639.
 - 52) Theodorides J. Origin of the myth of vampirism. *J Roy Soc Med* 1998; 91: 114.
 - 53) Rodriguez de la Sierra L. Origin of the myth of vampirism. *J Roy Soc Med* 1998; 91: 290.
 - 54) Castel O, Bourry A, Thevenot S, Burucoa C. Bacteria and vampirism in cinema. *Med Mal Infect* 2013; 43: 363-367.
 - 55) Zillmann D. *Connections between Sex and Aggression*, Laurence Erlbaum Associates, Hillsdale, New Jersey, 1984, pp. 30-31, 43-49.
 - 56) Fenton KA, Johnson AM, McManus S, Erens B. Measuring sexual behavior; methodological challenges in survey research. *Sex Transm Inf* 2001; 77: 84-92.
 - 57) Bunzli WF, Wright DH, Hoang AD, Dahms RD, Hass WF, Rotschafer JC. Current management of human bites. *Pharmacotherapy* 1998; 18(2): 227-234.