BITE MARKS COLLECTION FROM VICTIMS AND SUSPECTS

INTRODUCTION

- Bite marks, as the name indicates, as a mark caused by the teeth alone or in combination with other mouth parts, which are created by the bites of human/animals/beasts.
- Bite marks evidence are seen in sexual crimes, violent fights and child abuse.
 They may also occurs in other crimes like theft, homicide etc. Dog bites, beast bites and animal bites also come up for investigation sometimes.
- Bite marks are as specific to a person as DNA or fingerprint analyses, similarly, no two individuals will have the exact same dentition in regards to shape, size and alignment of teeth.

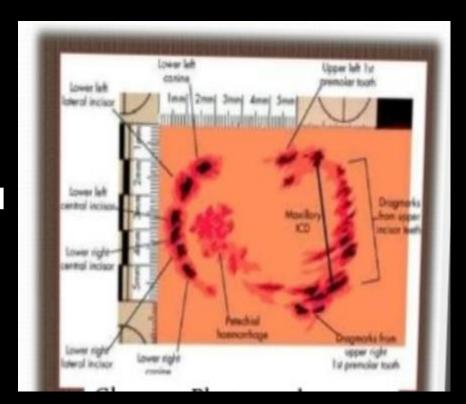
EVIDENCE COLLECTION FROM VICTIMS

- Bite marks evidence should be collected when it is first presented and observed. If suspected bite marks criminal in nature, it must be informed to law enforcement authorities.
- When a case of suspected bite marks is identified, a primary concern is patient care.
- Human bite marks to be more infectious includes transmission of HIV, Hepatitis-B and Syphilis especially when the bite injury presents as an abrasion and laceration.
- The protocol for bite mark evidence collection that follows has been recommended by the American Board of Forensic Odontology (ABFO)

- Case Demographics: Vital information pertaining to the case should first be noted:
- 1. Name of the victim
- 2. Age of the victim
- 3. Sex of the victim
- 4. Case number
- 5. Date of examination
- 6. Name of examination
- Documetation: Visually examine the bite marks and documents the following:
- 1. Orientation and Location of the mark
- 2. Shape, Size, Colour
- 3. Type of injury
- 4. Contour, texture and elasticity of the bite site
- 5. Differences between upper and lower arches and Between individual teeth.

Photography:

- Photography provide a permanent records of bite marks. No time should be wasted to collect pictures. Since the injuries change its appearance rapidly due to healing. Colour and black and white photos from different angles may be taken.
- Take repeat photographs. Include two scales place at a right angle to each other together and parallel to the lens.
- Take photographs before and after cleaning.
- Take additional similar shots at intervals of one day each till bite marks fade. The bite marks change colour and there is also some change in the shape, size of the marks with the passage of time.



- Take 3D photographs in those cases where the bite marks have depth and skin is torn.
- Collect skin carrying the bite marks if the victim is dead.
- Collect all photographs taken by the medicolegal expert in the Crime scene.

• Sketch:

- Prepare a sketch of the bite marks as faithful to the original as possible.
- Prepare a tracing of the bite marks on transparent sheet.

Saliva swab:

It is reasonable to assume that a bite cannot be inflicted without leaving saliva behind. Saliva which have been left during biting and will have to be collected.

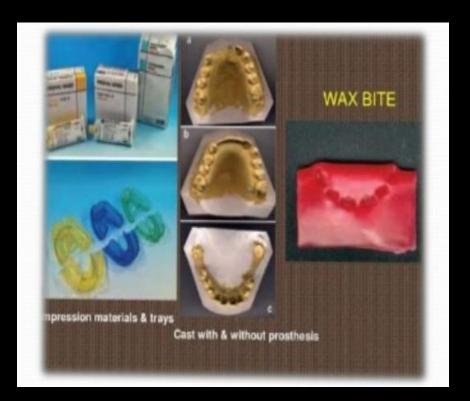
A double swab technique is used to collect the saliva. First a cotton swab that is dampened with distilled water is wiped over the area that the bite occurred. Then the Analysts use a dry swab to collect any of the moisture left over. Both swabs are dried for at least fourty five minutes before they are allowed to be tested. A DNA sample is also taken from the victim and is compared to the saliva swabs.



• Bite printing records: It is similar to the method of lifting fingerprints from crime scenes, fingerprint lifting tape can be used to lift the non perforating bite marks often brushing the bite marks with finger prints lifting powder. Excellent clarity and details are obtained with this method. There is no expertise required to lift the print and versatility and use of the fingerprint powder and Brush technique is yet to be explored.

• <u>Impression</u>:

 Indicated of the Bite marks should be taken According to the American Board of Forensic Odontology bite marks analysis guidelines. Dental acrylic or plaster can be used as a rigid support for the impression to accurately record the curvature Of the skin. Use vinyl polysiloxane poly ether or other dental information present in the dental office.



EVIDENCE COLLECTION FROM BITE SUSPECT

- Before collecting evidence from the suspect, the odontologist make should make certain that search warrant and legal consent has been obtained. Forensic odontologist or dentist collects the standard data for comparison from suspects. The Odontologist follows the following:
- Examine the suspect in the presence of a witness(es).
- Collect saliva sample from the suspects.
- Check the suspect for dental treatment and notes down the changes.
- Carry out dental charting of the bitting teeth.
- Record the occlusion and surface characteristics of the bitting teeth.
- Take a number of photographs of teeth of suspects from various angles.

- Prepare cast the dentitions preferably in dental mass.
- Obtain bite marks in soft materials like chewing gum for preliminary check.
- Obtain similar sliding marks on a hard objects like wood piece; plastic or metallic (lead, aluminium) sheet, if the question teeth marks are sliding form.

THANK YOU