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EDİTÖRE MEKTUP / LETTER TO THE EDITOR

Controversy of human bite mark as evidence to sentence criminals in courts

Mahkemelerde suçlulara ceza hükmedilmesinde delil olarak insan ısırık izlerinin kullanımının tartışılması

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Dear Editor,

Bite marks are recognized as evidence to sentence criminals in judicial system[1]. Human bite mark is a representative pattern left on an object or tissue such as skin by human dental structures[2].

There is growing disagreement for accepting bite marks as evidence for convicting criminals as it has been observed that bite marks have never been subjected to rigorous scientific testing[3]. Human dentition of every person is unique, but it is not so in case of bite marks especially when made on different materials of varying malleability and due to the dynamic nature of biting process[4]. However it is opinioned that bite marks left on malleable substances like cheese and chocolates have more potential for accurate identification, since it offers a three dimensional impression[5,6]. An error (false positive) in bite mark analysis may occur even when performed by experts[7]. False positive error has been reported of as high as 91% 4. Bite mark evidence should be accepted only when it is based on sound scientific methodology and when tested rigorously[7]. It has been observed that the qualities of bite mark evidence presented by forensic odontologists in courts are not based on sufficient quality and inconsistencies of findings among bite mark experts resulted in innocent people being imprisoned for no fault[3,8]. Cases in which people who were formerly falsely implicated based on bite mark evidence have been found to be innocent on salivary DNA testing[9]. It should be remembered that human skin is inherently not a good medium to get a record of accurate bite mark. Also tissue distortion, hemorrhage, wound healing, effect of suction and tongue activity on bite marks, postural and postmortem changes undermine the value of bite marks on skin even when performed with accuracy and with the help of advanced technology[3,4]. It's also possible that the bite mark present on a dead body might be afflicted by the sexual partner of the deceased and not by the criminal. This may lead to inadvertent imprisonment of the sexual partner of the deceased instead of real criminal, if bite mark is shown undue significance during evidence collection. It is difficult to practically carry on useful research on bite marks since it's impossible to get subjects who volunteer to be bitten enough to get wounded[10]. A recent study observed that there were inconsistencies in opinion regarding bite mark analysis between odontologists including the experienced ones[11]. Inconsistencies in opinions were observed regarding whether the bite mark was of humans or animals; or of a child or adult; whether it was a bite mark or not. Odontologists should particularly avoid giving strong positive conclusions regarding matching of the bite mark with the perpetrator[12]. Also observed is that bite mark analysis in child abuse cases, have statistically significant lower forensic value than those of other

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types of crimes[13]. However, bite marks could be used to collect trace saliva or DNA or to exclude a person in criminal cases[5]. It is advised that bite mark evidence should be used with caution and undue sole importance should not be given to it in criminal cases.

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