were consistent with the information given and toxicological analysis were positive for alcohol (2,15 g/L). **3**-A 22-year-old female was found dead in a pension room, rented the day before by the alleged aggressor and victim's ex-boyfriend. During the autopsy, classical signs of asphyxia were found, as well as several neck and head internal injuries. Additionally, purple ecchymosis was noticed in the uterus cervix. Both the toxicological analysis and vaginal / anal sample swab genetic screening were negative. The cause of death was blunt force trauma. **4**-A married couple was found dead by their son-in-law after leaving a suspicious note on his kitchen. The man was hanged and near the woman was a fiber ribbon with a lace. The findings in the 88-year-old female were compatible with ligature strangulation. This was an uncommon case of dyadic death. **5**-A couple was found dead in a car that was retrieved from the river. The 58-year-old female had her wrists tied up with duct tape. The autopsy findings suggested death by drowning, confirmed through histopathology exam of the lungs. In conclusion, cases like those presented, illustrate that forensic pathologists need to be aware of the most common causes of deaths related to IPH, keeping in mind that less common cases should not be out of sight as to avoid errors in establishing the correct manner of death. That can be attained by always making a careful and detailed examination of the traumatic lesions, including morphological features and topographical distribution and also evaluate the need for complementary studies.

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EVALUATION OF SAMPLE COLLECTION TECHNIQUES TO RECOVER DNA FROM BLOODSTAINED CONSTRUCTION MATERIALS

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Recovering DNA from trace-amounts of blood that has been deposited on hard porous materials such as concrete can be problematic. Construction materials are often a composite matrix that contain a numerous ions that can have inhibitory effect on the PCR, making subsequent STR analysis challenging. Moreover, biological samples including blood can be become embedded within the material's porous matrix potentially reducing the amount of DNA recovered. This study evaluated the effectiveness of three collection techniques in their ability to recover DNA from minute volumes of blood that had been deposited on construction materials. Two techniques utilized swabs; the first technique used one swab (half wet, half dry) and the second used two swabs (one wet, one dry) to recover the sample. The third method evaluated tested the ability of FTA elute cards to recover the samples and their components through capillary action. FTA Elute cards contain a chaotropic salt that can lysis cells and keep proteins tightly bound as DNA is eluted from the matrix, making for a simple extraction process (a 30 minute incubation in water at 70°C). In comparison, the QIAamp DNA Investigator extraction protocol (Qiagen) was used to extract the DNA from swab collections. The project has shown that when 5 µL of blood was deposited on hard porous materials there is significant difference ($P<0.05$) between the three extraction techniques. Sample collection using one swab and two swabs yielded an average of 89 and 158 pg/µL genomic DNA respectively. In comparison, FTA Elute cards yielded an average of 665 pg/µL. This study demonstrates the potential of using FTA Elute cards as a collection tool, showing a significant improvement when compared to its traditional collection method counterpart, the swab. FTA Elute cards can provide a reliable, inexpensive and superior alternative to traditional methods, which will benefit the organization assigned to profiling.

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A STUDY ON FEMALE HOMICIDES FROM THREE PROVINCES IN SRI LANKA

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Introduction When death occurs due to violence, there is an immeasurable impact on members of families and communities whose lives are often changed irrevocably by these tragedies. Despite the deep rooted gender perceptions and assumptions in Sri Lankan society towards females, homicide of a female is condemned far greater than a male. Objectives To determine the association between age, socioeconomic, cultural background and etiology as well as the presence of sexual abuse/ rape/ intimate partner violence among the female victims of homicide. Methodology A retrospective descriptive study on alleged female homicides in three provinces, namely, Western, Southern and North Central was conducted using police records and post-mortem reports for a period of three (3) years (2013-2015) by perusing the records following approval from relevant stake holders. Data was obtained according to a pro-forma employing convenient sampling method and analyzed using Statistical Package for Social Sciences 16. Results Out of 99 female homicides studied 12% were less than 20 years olds while 19% were elderly. The majority (63%) were from rural areas. 41 % were house wives while 3% were professionals. The majority (56%) were married while 6% were widowed. The analysis of the time of the homicide revealed that 61% occurred after mid-day. The alleged perpetrator was the husband or ex-lover in 29% while it was a known person in 28%. The most common reason for the death was a family dispute in 21% while extra-marital affair was quoted in 12%. The analysis of the cause of death revealed that 21% was due to head injury, 19% due to neck compression, and 16% -due to sharp force trauma. . Rape and murder was found in 13% while intimate partner violence either by the husband or the co-habitant was recorded in 30%. Head injury and sharp force trauma are commonly associated with intimate partner violence while neck compression is the commonest cause of death in rape and murder. Conclusion Majority of Homicidal deaths of females were due to head injury or neck compression whereas the perpetrator was husband, ex-lover or a known person. The commonest underlying reason for killing of a woman is disputes in the family.

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USING IMOTIONS SOFTWARE TO IDENTIFY A CORRELATION BETWEEN EMOTIONS AND PHYSIOLOGICAL PROCESSES

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Emotional reactions are stimulated when humans are presented with a stimulus, triggering a series of voluntary and involuntary responses. Human emotions can be measured from facial expressions and physiological processes. The iMotions biometric platform is able to detect and analyze the responses of different individuals, which are personalized. Using iMotions allows for the quantification of seven basic emotions: joy, sadness, anger, fear, contempt, surprise, and disgust. Along with facial expressions, participants' galvanic skin response (GSR) and heart rate were measured using the shimmer kit's sensors. GSR refers to the phenomenon wherein the skin temporarily becomes a better conductor of electricity due to elevated sweat gland activity. The iMotions software allows for easy comparison of the emotions and the physiological responses of the participants by simultaneously displaying the facial expressions data along with the GSR and heart rate readings. Using iMotions and the shimmer kit, this project aims to identify a possible correlation between the participants' facial reactions and their physiological responses, namely, their heart rate and skin conductance,