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Original Article

Evaluation of the cases referred to İnönü University Department of Forensic Medicine between 2012-2015 for the determination of a fixed scar on the face

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Abstract

Aim: Our study deals with the evaluation of Fixed Scars on face (FSF) and its forensic, medical and biopsychosocial implications of facial injuries. It is emphasized that the Turkish Penal Code defines FSF as an aggravating factor of the penalty.
Materials and Methods: A retrospective study was conducted based on the examinations performed for forensic medical evaluation at Malatya İnönü University.
Results: Facial injuries were analyzed in 42 cases between 2012 and 2015; the causes of injury included traffic accidents (54.8%), injury resulting from effective action (31%), explosive and firearm injuries. It was found that the most common injuries were in the forehead region (71.4%) and hyperpigmented or depressed scars were more likely to cause a positive FSF.
Conclusion: The rate of FSF was found to be 26.2% and blunt traumas were reported to cause more prominent FSF such as hyperpigmented lesions. In the study, the necessity of standardization in forensic reports was emphasized and it was stated that such studies should be increased in the literature.

Keywords: Fixed scar on face, forensic medicine, Turkish penal code

INTRODUCTION

The face region has an important place in daily communication and social life for humans, who are a social element. It is defined as the document in the foreground of status and role in society and the focal point of communication between people [1-3]. Marks due to obvious scar tissue that attract attention at first glance due to injuries in the facial area can also cause many biopsychosocial problems in interpersonal communication within social relations [4-6].

Articles 87 and 89 of the Turkish Penal Code (TPC) include injuries related to the face region. The fact that the act of injury has a fixed scar on the face (FSF) has been accepted as one of the aggravating factors of the crime and it has been stated that the amount of punishment to be given to the person will be increased [7]. According to the "Guide to Evaluation of Injury Crimes Defined in the Turkish Penal Code in terms of Forensic Medicine", when assessing FSF, it is important whether the mark resulting from the injury in the face region is noticeable and permanent rather than the forensic/medical severity of the trauma [8]. Again, in the same guide, the definition of the facial region is made as "the area between the scalp border on the top (including the area in front of the imaginary line connecting both ears from the top in people with permanent hair loss or severe hair loss) when looking at the person from the front and sides, the points where the imaginary straight lines descending from the ear helix intersect with both

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clavicles, including the front surfaces of the ears on the sides, and the lines starting from the fossa jugularis below and following the clavicles to the sides".

To assess whether an injury to the facial area results in a permanent disability, the necessary healing time (for scar tissue healing) must have passed. Therefore, for a scar tissue located within the boundaries of the face to be evaluated in terms of permanent disability, medical treatment and legal precedents indicate that at least 6 months must have passed since the injury. Additionally, even if this period has passed, if the physician believes that healing has not yet fully completed and changes in the scar tissue are still on going, a longer wait [9,10].

The aim of this study was to retrospectively evaluate the files of cases with facial injuries referred by judicial authorities to the Department of Forensic Medicine, Faculty of Medicine, Malatya İnönü University, for examination and preparation of a final report.

MATERIAL AND METHOD

In the study, the files of cases referred by the judicial authorities to the Forensic Medicine Department of Inonu University Faculty of Medicine in Malatya for the preparation of final reports between 2012 and 2015 were retrospectively examined. Cases with facial injuries were included in the study. If the cases had not yet passed 6 months since the incident at the time of their initial examination, they were called back for re-examination after 6 months and evaluated for FSF. The examinations were conducted with the assistance of two physician associate and one faculty member."

The cases were evaluated in terms of age, gender, cause of injury (traffic accident, assault, burn, gunshot wound, stabbing or cutting injury, explosive device injury), location of the injury on the face (forehead, ear, eye, zygoma, nose, chin), characteristics of the wound (level with the skin, depressed, raised, same color as the skin (normopigmented), lighter than the skin (hypopigmented), darker than the skin (hyperpigmented)), the time elapsed between the incident and the examination, and whether the injury constitutes a FSF.

Ethics committee approval for our study was obtained from the İnönü University Health Sciences Non-Interventional Clinical Research Ethics Committee with the decision numbered 7463.

RESULTS

In our study, 39 (92.9%) of the patients were male and 3 (7.1%) were female. The mean age was 37.9±12.6 years (17-74 years). Traffic accidents accounted for 23 cases (54.8%), injury resulting from effective action for 13 cases (31.0%), explosive and gunshot wounds for 2 cases each (4.8%), and burns and sharps injuries for 1 case each (2.4%).

Regarding the localization of the wound on the face, 30 cases (71.4%) were on the forehead, 3 cases (7.1%) each on the eyelid and zygoma, 2 cases (4.8%) each on the ear and nose, and 1 case (2.4%) each on the chin and lip. 21 cases (50.0%) healed without scarring. When the wound characteristics were examined; according to the skin level, it was seen that 12 cases (28.6%) were sunken compared to the skin, 4 cases (9.5%) were raised from the skin at the same level with the skin and 1 case (2.4%) had tissue loss. According to skin color, 12 cases (28.6%) were hyperpigmented, 5 cases (11.9%) were hypopigmented, 3 cases (7.1%) were normopigmented and 1 case (2.4%) had tissue loss.

When the time elapsed between the injury and the examination was analyzed, it was observed that 12 cases (28.6%) had an 8-month delay, 11 cases (26.2%) had a 6-month delay, 8 cases (19.0%) had a 7-month delay, 6 cases (14.3%) had a 9-month delay, 1 case (2.4%) had a 10-month delay, and 4 cases (9.5%) had a delay of 12 months or more.

Injuries with fixed facial scars were observed in 11 cases (26.2%). When the incidents of the injuries with fixed facial scars were analyzed, it was seen that 7 cases (16.7%) were traffic accidents, 1 case (2.4%) each were burn, beating, gunshot wound and sharp piercing instrument injuries. Regarding the characteristics of the wounds that were fixed scars on the face, it was observed that they were at the same level as the skin with tissue loss in 1 case each (2.4%), depressed from the skin in 5 cases (11.9%), and raised from the skin in 4 cases (9.5%) according to the skin level. In addition, according to skin color, it was hypopigmented with tissue loss in 1 case each (2.4%) and hyperpigmented in 9 cases. Regarding the localization of the wounds, 7 cases (16.7%) had wounds on the forehead and 1 case (2.4%) each had wounds on the ear, nose, lip and zygoma (Table 1).

Table 1. Characteristics of cases and wounds with facial fixed scars

Sex	Age	Event type	Location relative to skin	Relative to skin color	Wound localization
Male	33	Beating	Loss of tissue	Loss of tissue	Ear
Male	54	Burned	Depressed	Hypopigmente	Frontal
Male	27	Traffic accident	Elevated	Hyperpigmented	Nose
Male	45	Traffic accident	Flush with the skin	Hyperpigmented	Frontal
Female	32	Firearm	Elevated	Hyperpigmented	Lips
Male	34	Traffic accident	Depressed	Hyperpigmented	Frontal
Male	52	Traffic accident	Depressed	Hyperpigmented	Frontal
Male	47	Traffic accident	Elevated	Hyperpigmented	Zygoma
Male	30	Traffic accident	Depressed	Hyperpigmented	Temporal
Male	26	Traffic accident	Elevated	Hyperpigmented	Frontal

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DISCUSSION

It is known that scarring as a result of facial injuries and the fact that this scar is noticeable by others at first glance cause many biopsychosocial problems. In addition, the concept of FSF is defined in the Turkish Penal Code and is shown among the qualifying factors that increasing the penalty. Therefore, the opinions reported in terms of fixed facial scarring are of great importance.

The mean age of the patients included in our study was 37.9±12.6 years (17-74 years). In previous studies, the mean age was found to be compatible with our study [11,12]. When the gender distribution of the cases in our study was analyzed; 39 (92.9%) were male and 3 (7.1%) were female. When various studies conducted in our country with forensic trauma victims who were evaluated with FSF were examined, it was observed that the gender distribution was in parallel with our study [11-13]. This was thought to be due to the fact that males were injured at higher rates than females.

When the causes of injury of the cases we evaluated in the study were examined, it was observed that 23 (54.8%) were traffic accidents, 13 (31.0%) were assault and battery, 2 cases (4.8%) each were explosive and firearm injuries, and 1 case (2.4%) each were burns and sharps injuries. In the literature, it was observed that the number of sharps injuries was close to blunt trauma, although it was observed that there were more admissions after blunt trauma exposure [12,13]. It was thought that this distinction was made because the number of people exposed to blunt trauma was higher compared to other traumas.

When the localizations of the lesions in the cases in our study were examined, it was observed that the most common lesion site was the forehead, followed by the eyelids and cheeks. In studies conducted in the literature, it was observed that the forehead was the most commonly injured area followed by the eyebrows [12-14]. We think that the high number of lesions in the forehead region is due to the anatomical features of the face as well as the difference in the distribution of subcutaneous support tissues in the facial region. When the color and level distributions of the lesions found in our study were examined according to the skin, it was observed that they were compatible with the literature [13,14].

In our study, the rate of FSF positivity was 26.2%. It was observed that blunt traumas resulted in a higher incidence of fixed scars on face (FSF). Hyperpigmented lesions and skin depressed lesions were found to cause more FSF positivity. It was observed that injuries in the forehead region caused more FSF positivity. In previous studies, it was observed that exposure to blunt trauma and hyperpigmented scar tissue caused more FSF positivity [11-15]. It was thought that irregular wound lips after blunt trauma exposure affected healing and caused more positivity. In addition, it was thought that hyperpigmented lesions attracted more attention and caused FSF positivity.

CONCLUSION

In our study, blunt traumas, hyperpigmented lesions and skin depressed lesions were found to cause more FSF positivity. Injuries in the forehead region were found to be more likely to cause a positive FSF. Since facial fixed trace is an important argument in terms of increasing the penalty, it is very important to ensure standardization in the reports. Such studies are important as they will ensure standardization and reduce the contradiction between reports. We believe that such studies should be increased in the literature.

It was presented at the 1st International TURAZ (Türkiye-Azerbaijan) Forensic Medicine and Pathology Congresson 13-16 October 2016 in Baki/Azerbaijan.

Conflict of Interests
The authors declare that there is no conflict of interest in the study.

Financial Disclosure
The authors declare that they have received no financial support for the study.

Ethical Approval
Ethics committee approval for our study was obtained from the İnönü University Health Sciences Non-Interventional Clinical Research Ethics Committee with the decision numbered 7463.

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