

Klinik Çalışma

Investigation of Geriatric Age Group Trauma Cases Applying to Plastic Surgery Clinic

Serdar Yüce^{*}, Mustafa Öksüz^{*}, Muhammet Eren Ersöz^{*}, Ahmet Kahraman^{**}, Dağhan Işık^{***}, Bekir Atik^{****}

Abstract

Aim: The evaluation of patients over 65 years old applying to Plastic Surgery Clinic because of trauma.

Method: Geriatric age group trauma patients who applied to Plastic Surgery Clinic between the 2010-2014 years were included in the study. The ages, genders, diagnosis, trauma reasons, localizations, surgical applications, additional internal problems, anesthesia types and additional treatments given were classified.

Results: When trauma reasons were examined in 9 patients (39.13%) falling, in 6 of them (26.09%) traffic accident, in 2 of them (8.7%) injuries of sharp objects, in 2 (8.7%) injuries of animal, in 2 (8.7%) injury of tractor belt, in 1 of them (4.34%) pounding and in 1 of them (4.34%) injury of rope were obtained. When applied surgeries were examined in 6 (26.09%) patients open reduction and internal fixation was done for maxillofacial fracture, in 6 of them (26.09%) saturation for cuts, in 5 of them (21.74%) follow up for maxillofacial trauma, in 4 of them (17.40%) tendon repair, in 1 (4.34%) patient intermaxillar fixation for mandibula fracture and in 1 patient (4.34%) flap repair for tissue defect.

Conclusion: Surgical treatment of many old facts can be done securely with well preoperative preparation and efficient and functional results can be taken.

Key words: Geriatrics, aging, falling, maxillofacial injury, hand injury

Introduction

There is a rapid growth and characterised development in the number of olds in world's population due to the amendment of life standards and well medical maintenance. Although old people get rarely injured compared to other groups, trauma facts increases in geriatric population because of increase in

number of olds and their adoption of more active life style (1-6). Since trauma generally affects young age group, it is the fifth most important reason of death over 65 years of age (3,6). Aging and decreased senses are the most known risk factors for side effects after trauma. The average of mortality and morbidity increases in old trauma patients (7-9).

The physiologic changes of aging form an apparent effect on trauma patients over 65 years of age. There are many factors to ease the wounding of olds. The changes in postural stability, strength, balance and coordination ease the falling and other injuries (10,11). The decrease in eye sight, the loss in peripheral vision and hearing cause insufficiencies to realize environmental damages. Additional metabolic defects, cardiac rhythm problems, the effects of medicines, decrease in memory and reasoning also increase the accidental injuries (10,12).

In our study we did the evaluation of patients over 65 years of age that applied to Plastic Surgery Clinic in the last 4 years because of trauma.

Materials and Method

Geriatric age group trauma patients who applied to Plastic Surgery Clinic between the years 2010-2014 were included to the study. The

^{*}Yüzüncü Yıl University, Faculty of Medicine, Department of Plastic, Reconstructive and Aesthetic Surgery, Van-Turkey

^{**}Mustafa Kemal University, Faculty of Medicine, Department of Plastic, Reconstructive and Aesthetic Surgery, Hatay-Turkey

^{***}Katip Celebi University, Faculty of Medicine, Department of Plastic, Reconstructive and Aesthetic Surgery, Izmir-Turkey

^{****}Medeniyet University, Faculty of Medicine, Department of Plastic, Reconstructive and Aesthetic Surgery, Istanbul-Turkey

Corresponding Author: Serdar Yüce M.D.

Yüzüncü Yıl University, Faculty of Medicine, Department of Plastic, Reconstructive and Aesthetic Surgery, 65100 Van-TURKEY

Tel: +90 0432 2150472

Fax: Tel: +90 0432 2150472

E-mail: yuceserdar23@yahoo.com

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age, gender, diagnosis, trauma reasons, localizations, surgical applications, additional internal problems, anesthesia types and additional treatments given were classified.

Results

In examinations it was obtained that there were 23 traumatic geriatric patients. Since the age range of patients were 66-90 years, the age average was found as 73.21 years. Six of the patients (26.09%) were women whereas 17 of them (73.91%) were men. When trauma reasons were examined in 9 of them (39.13%) falling, in 6 of them (26.09%) traffic accident (5 of them inside the car, 1 of them outside the car), in 2 of them (8.7%) injury of sharp object, in 2 of them (8.7%) injury of animal (biting and pounding), in 2 of them (8.7%) injury of tractor belt, in 1 of them (4.34%) pounding and in 1 of them (4.34%) injury of rope were obtained. The localization of injury areas were given in Table 1. When applied surgical processes were examined, in 6 of the patients (26.09%) open reduction and internal fixation for maxillofacial fracture, in 6 of them (26.09%) saturation for cutting (also K fixation in 1 patient), in 5 of them (21.74%) follow up with medical treatment due to maxillofacial trauma, in 4 of them (17.40%) intermaxillar fixation due to mandibula fracture (in 3 facts fixation done with K wire) and in 1 of them (4.34%) due to tissue defect repair with flap was done. When additional systemmatic problems were examined in the first three ranks there found hypertension, diabetes mellitus and congestive heart failure. The additional internal problems were given in Table 2. In 9 of the patients (39.13%) general anesthesia, in 8 of them (34.79%) local anesthesia and 1 of them (4.34%) spinal anesthesia were used and 5 of the patients (21.74%) were not operated.

Discussion

Aging is defined as a biological, sociological and physiological condition (5). The physiological changes caused by aging forms a significant effect on trauma patients over 65 age. The respond that old individuals show to trauma is related to limited physiological reserves (10,13). With aging there shows up a decrease in cardiac flow and provision of efficient tissue oxygenation during stress. Muscle atrophy, osteoporosis and decreased subcutaneous tissue cause more serious injuries in older people as a result of trauma (1,10,12,14). In addition the frequent usage of medication causes changes on cardiovascular responds. As a result of this there occurs changes in sensitivity of parameters that

are used in physiological and hemodynamic evaluation of injury (10).

Table 1. Localization of injury areas

	Number
Zygoma	7
Mandible	4
Periorbital region	3
Nasal bone	3
Finger	2
Hand	2
Foot	2
Malar region	1
Buccal region	1
Thigh	1
Total	26

Table 2. Accompanying internal problems

	Number
Hypertension	6
Diabetes mellitus	3
Congestive heart failure	2
Coronary artery disease	1
Cerebrovascular disease	1
Benign prostatic hypertrophy	1
Total	14

The most frequent reason of injuries of old people is falling (1,10,15). They cause increase in mortality, functional disability and decrease in life quality (1,16). Those fallings usually happen in flat areas or low heights like stairs. Even in these simple injuries cause serious results. Falling from high places are rarely seen in old people (1,10,17). In our study there occurred injuries because of falling in 9 patients. In 4 of them there was fracture in zygomatic bone, in 2 of them there was mandibular fracture and in 3 facts there was skin cut. Since there was no surgical indication in 3 patients having zygoma fracture, they were followed up with medical treatment, a treatment was provided with open reduction internal fixation method in 1 patient. One fact having mandibula fracture a treatment was provided by open reduction internal fixation method whereas it was provided with intermaxillar fixation in another fact. Three facts having skin cut were treated with suturation.

Old people want to enjoy life with social life as well as working actively in professional jobs (18,19). As a result of this traffic accidents, sharp object injuries, gun injuries and poundings are other injury reasons.

Maxillofacial trauma should be thought as a typical problem of young people. In reality rare maxillofacial defects can be seen in old people compared to the rest of the population. However as a result of increasing life period and more active life style, the number of old people having maxillofacial trauma and the requirement for trauma treatment increase (5,18).

The golden rule of reconstruction surgery in old people is to prefer simple methods. If it is possible the process should be done by IV sedation and local anesthesia. If operation is long, general anesthesia should be preferred (18,20). In the method of old people having facial fracture, it is important for the surgeon to know the anatomic and physiologic structure of aging period. Biological aging contains both general condition and specific structural maxillofacial changes (5). With advancing age, there is inevitable reserve loss in each organ system (5). It is seen in maxillofacial region, enlargement in paranasal sinus and at the same time bimaxillar alveolar bone with advancing resorption specification especially in edentulous region. At the end of all these changes there seen a decrease of power of facial skeleton against traumas (5).

Today it is tried to be provided not only repair but also esthetic restoration in people between 65-75 because this part of population still survives an active life. Generally over 75 years old the approach of surgeons change. Because of increased operative risk and insufficiency of self, general health condition should be examined. Function restoration is important however a good quality of life is more important than esthetic restoration. Each patient having facial fracture should be evaluated according to mental condition, fracture type and social status (5). During treatment of facial trauma in old patients, it is important to take algorithms into consideration. The changes related to age in middle facial bones are not taken into consideration. Those are treated with general techniques (18). In orbitozygomatic region fracture should be operated when there is an important movement in bone structures that cause chewing disorder or double seeing (5). Edentulous structure is frequently seen in old people and it affects the reduction of maxilla and mandibula fractures. Fracture reduction is hard and it can cause iatrogenic fractures. It may be necessary to remove bone plaques from edentulous chins (18). In mandibula fractures surgical indications are unfavorable, expose fracture, mandibula movement limitation. Especially in condyl fractures there is no

functional obstacle so surgeons suggest conservative treatment. In those patients the change in occlusion is not an indication reason because these patients are frequently edentulous or partially edentulous (5). If there is collapse in nasal fractures or existence of a condition of medialization of nasal pyramid that causes infunctoriality of airway, surgical operation will be done. In other complex maxillofacial fractures, there is important displacement of fragments and if fractures cause a functional problem, surgical operation will be applied (5).

In our patient group we obtained maxillofacial fracture in 11 patients. In 4 of them mandibula fracture was observed and in 3 of them treatment was provided by open reduction internal fixation and 1 of them treatment was provided by intermaxillar fixation. Since in 3 patients having zygoma fracture there obtained open reduction internal fixation (Figure 1), 4 of them were followed by medical treatment. 3 facts having zygoma fracture were treated by nasal fracture tamp.

The other group of geriatric age group trauma patients is formed by extremity injuries. Especially hand injuries are encountered more. There are some physical and psychological problems in geriatric age group like decrease in movement, sight and hearing. The longness of reaction period is the reason of this age group (18). Also the longness of this period increases the seriousness of injuries. We can encounter wide spectrum injuries on the hand from facial cuts to soft tissue, tendon, nerve injuries and amputation. Generally these injuries can be treated under local anesthesia. For old patients necessary treatment should be provided with more simple and short methods rather than complex repair techniques. In surgical planning treatment method should be chosen by considering the disease, additional diseases and general condition of the patient. Functional result should be taken forefront than esthetic result when necessary (18,21). In many facts the same treatment protocols is used with young age group. In amputations replantation decision should be taken by considering the general condition of patient.

In our study group 1 finger injury was repaired with flap, in 3 patients tendon repair and fracture fixation was done with K wire. In 1 patient the necessary treatment was provided with tendon repair (Figure 2), in another fact fracture fixation was provided with K wire and cut suturation and in 1 fact the treatment was provided with skin cut suturation in femoral.

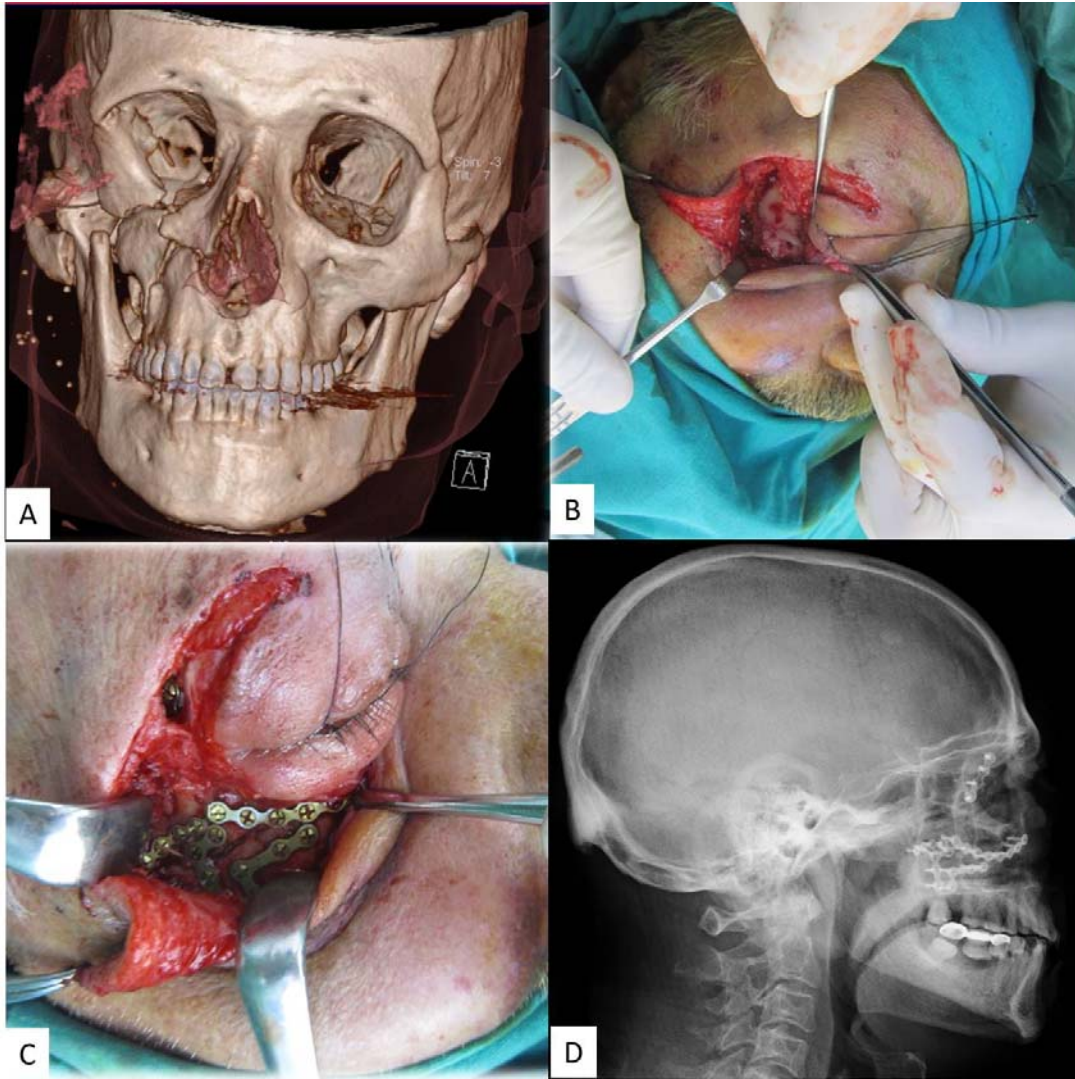


Fig. 1. (A) Preoperative 3D computed tomography appearance of the maxillofacial fracture. (B) Appearance after intraoperative exploration. (C) Intraoperative appearance after internal fixation. (D) Postoperative X-ray appearance of the early result.

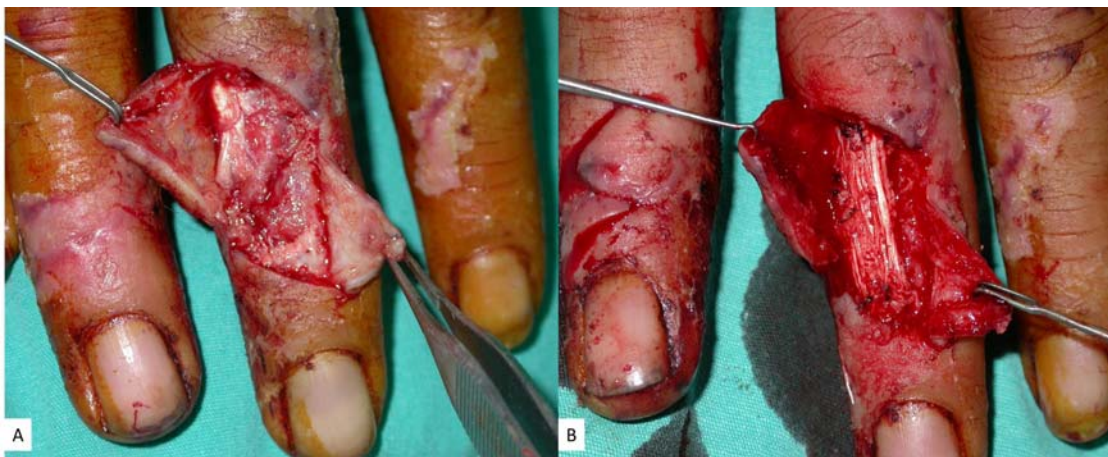


Fig. 2. (A) Intraoperative appearance of the tendon injury. (B) Intraoperative appearance of the early result after tendon repair.

As a result, in Plastic Surgery Clinics increasing traumatic geriatric age group patients will be encountered. Morbidity and mortality can be decreased by understanding the necessities and specific properties of old people. Old people should be evaluated according to the effects of aging period rather than their chronological ages. With well preoperative preparation surgical operation of many old trauma facts can be done securely and efficient functional and esthetic results can be taken.

Plastik Cerrahi Kliniğine Başvuran Geriatrik Yaş Grubu Travma Olgularının İrdelenmesi

Özet

Amaç: Plastik Cerrahi Kliniğine travma nedeniyle başvuran 65 yaş üstü hastaların değerlendirilmesi yapıldı.

Yöntem: Çalışmaya 2010-2014 yılları arasında Plastik Cerrahi Kliniğine başvuran geriatrik yaş grubu travma hastaları dahil edildi. Hastaların, yaşları, cinsiyetleri, tanıları, travma nedenleri, lokalizasyonları, yapılan cerrahi işlemler, ek dahili problemler, anestezi türleri, verilen ek tedaviler sınıflandırıldı.

Bulgular: Travma nedenleri incelendiğinde 9 (%39.13) hastada düşme, 6 (%26.09) hastada trafik kazası, 2 (%8.7) hastada kesici alet yaralanması, 2 (%8.7) hastada hayvan yaralanması, 2 (%8.7) hastada traktör kayış yaralanması, 1 (%4.34) hastada darp, 1 (%4.34) hastada ip yaralanması olduğu saptandı. Yapılan cerrahi işlemler incelendiğinde 6 (%26.09) hastada maksillofasiyal fraktür için açık redüksiyon ve internal tespit, 6 (%26.09) hastada kesi nedeniyle sütürasyon, 5 (%21.74) hastada maksillofasiyal travma nedeniyle medikal tedavi ile takip, 4 (%17.40) hastada tendon onarımı, 1 (%4.34) hastada mandibula fraktürü nedeniyle intermaksiller fiksasyon, 1 (%4.34) hastada doku defekti nedeniyle fleple onarım yapıldı.

Sonuç: İyi bir preoperatif hazırlıkla birçok yaşlı travma olgusunun cerrahi tedavisi güvenle yapılabilmekte ve yeterli fonksiyonel ve estetik sonuç alınabilmektedir.

Anahtar kelimeler: Geriatri, yaşlanma, düşme, maksillofasiyal yaralanma, el yaralanması

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