

**EVALUATION OF  
IMMEDIATE TREATMENT OF  
MAXILLOFACIAL SOFT TISSUES INJURIES  
(Clinical and Follow up Study)**

**A Thesis**

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# Abstract

## **Background:**

Trauma to the facial area is common and produces a variety of injuries. The resultant injury was superficial and involved only the overlying soft tissues; or there was concomitant damage to the underlying skeletal structures, or there may be osseous injuries with no soft tissue injury.

Regardless of the severity of the wound, patients exhibit considerable concern about any wound involving the facial region.

Early definitive care of these wounds is imperative to minimize loss of function and prevent facial disfigurement.

## **Aims of the study:**

To evaluate the immediate (primary) treatment of the maxillofacial wounds with prognosis in relation to injury, and evaluate the extent of injury whether it is soft tissue injury only or associated with a component hard tissue injury.

## **Materials& Methods:**

This prospective study was undertaken clinically on **(85)** patients presenting with maxillofacial injury. There were **64(75.3%)** males and **21(24.7%)** females, their ages ranged from **8y to 68y** with mean age of **31.3** years.

These patients were seen in the consultation clinic of oral and maxillofacial surgery in **AL-YARMOUK** hospital (from November 2006 to November 2007), to evaluate the outcomes and assess the results of simultaneous management to treat the soft tissue injury primarily, and to treat any underlying hard tissue injury.

A thorough clinical examination was carried out started by:

- 1) General examination.
- 2) Local examination (extraoral& intraoral).
- 3) Radiographical examination.
- 4) Laboratory investigations.

Some cases were treated immediately and other cases were delayed in treatment according to the priorities and their conditions.

### **Results:**

The most common cause of injury was missile injury (shell& bullet) 37 cases (43.5%) were injured due to shells, 22 cases (25.9%) due to bullets, 16 cases (18.8%) due to road traffic accident, 6 cases (7.1%) due to assault, 4 cases (4.7%) due to falls.

The patterns of injury (types of the wounds) of 85 patients were found to fall into 6 categories :

Penetrating (26) cases (30.6%), perforating (15) cases (17.6%), avulsive (12) cases (14.1%), lacerating (22) cases (25.9%), contusion (4) cases (4.7%), abrasion (6) cases (7.1%).

Soft tissue injuries constituted (37) cases (43.5%) only, and associated facial skeleton injury (#) constituted (48) cases (56.5%).

(36) Cases (42.3%) required primary closure, (35) cases (41.2%) required secondary closure or delayed primary closure and (14) cases (16.5%) required no closure (only conservative treatment).

In this study, 57cases(67.05%) were controlled with pressure pack,6 cases(7.05%) were controlled with clamping, 12 cases(14.1%) were controlled with ligation. The remaining 10 cases were contusion& abrasion.

Some patients in this study had respiratory problems, so (11) cases (12.9%) of airway obstruction needed emergency tracheostomy. While (9) cases (10.6%) of airway obstruction needed elective tracheostomy.

In this study (49) cases (57.6%) were be treated with one (single) operation, while (36) cases (42.4%) required more than one operation or further surgery.

When examined the patients postoperatively, we found that (19) patients (22.5%) out of 85 patients, had post-operative complications, distributed as: Infection(9.4%), bleeding (2.4%), necrosis(2.4%), nerve injury (2.4%), hematoma(2.4%), limitation of mouth opening (1.2%), dehiscence (1.2%), sialocele(1.2%).

### **Conclusions:**

Trauma to the face is common in war or peace. The immediate definitive treatment of maxillofacial wounds favorably influences the outcome of all degrees of facial injury.

The general condition of the patient, timing and sequence of the operations, extent of damage, and proper application of appropriate surgical hardware for reconstruction and rehabilitation of patients have proved to be influential to the final outcome and esthetic result.

In this study, it was seen that maxillofacial injuries due to missiles (shells or shrapnels) are much greater than other causes which is due to the changes and advances of weapons which were used in Iraq.

Primary treatment of facial injuries has been directed to the management of both hard and soft tissue injuries at the time of debridement (first maxillofacial operation). This does not, however, in any way mean that this is inevitably possible in all cases but only that it was done in all feasible cases.

Primary closure results in more rapid healing and reduced patient discomfort than does secondary closure.

The most commonly used method for closing soft tissue injury remains suturing.