



# Escharotomy for the face: Facial aesthetic subunit principle-based approach

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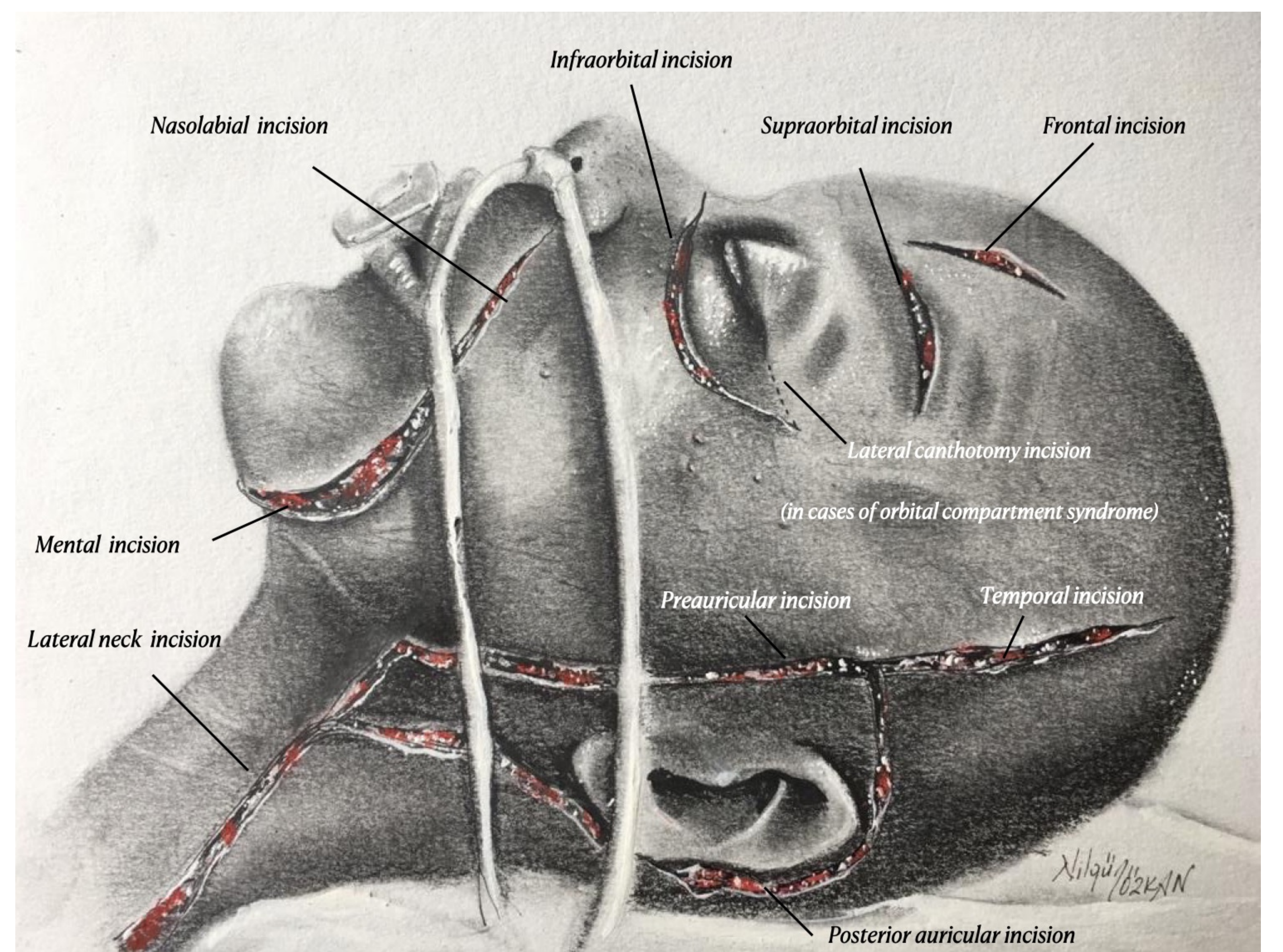
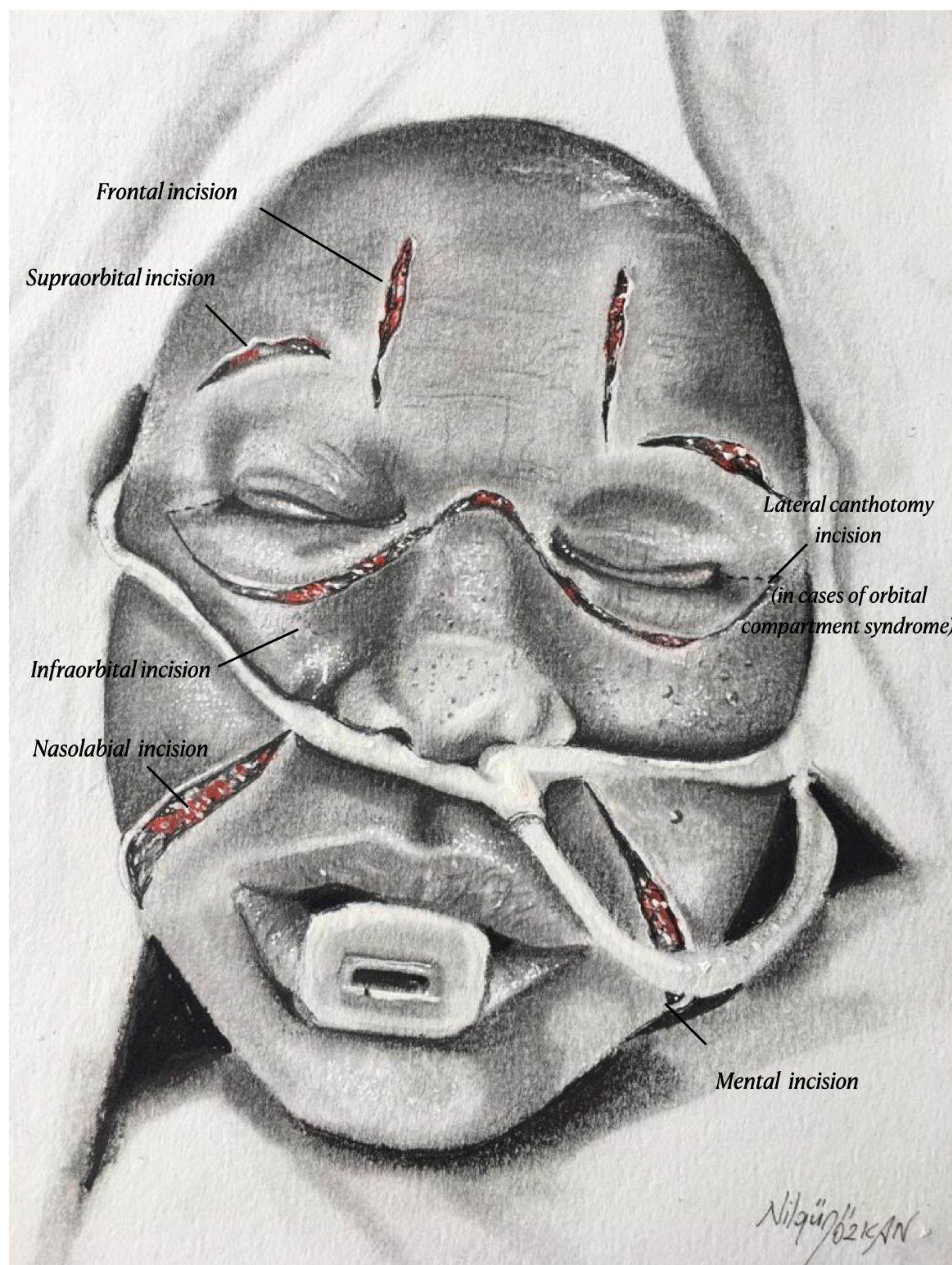


## Introduction

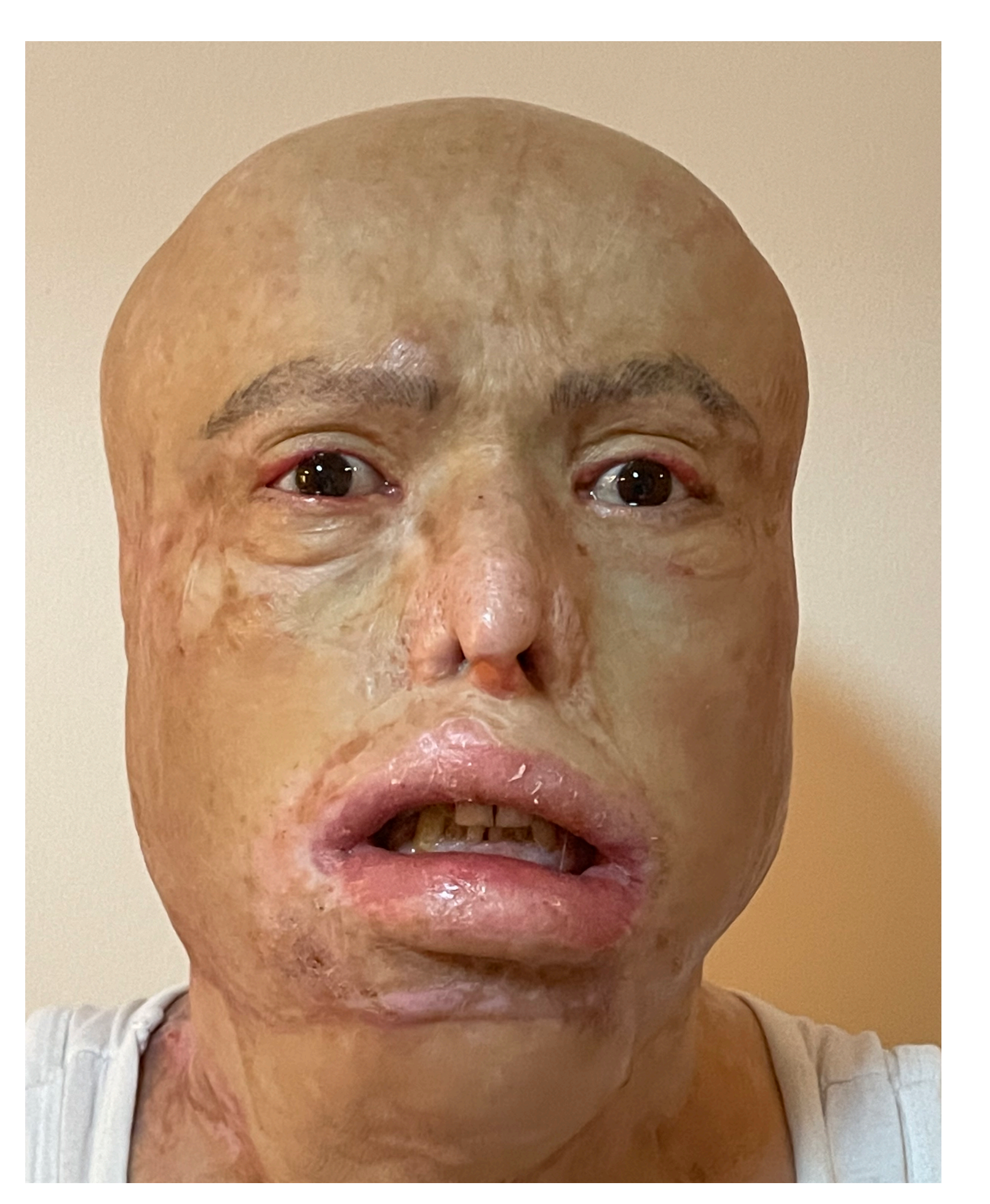
Escharotomy is the relaxation of the eschar through longitudinal or horizontal incisions in order to protect the deep perfusion. The pressure that it will create in the peripheral areas such as hand, limb, trunk, and neck causes the circulatory disorder in the limb and the risk of limb loss, inadequate thoracic expansion in the thorax and vital perfusion and oxygenation problems in the neck. It is one of the most basic rules of burn surgery to perform the determined escharotomy incisions very quickly and without hesitation to prevent complications. On the other hand, the face is not an area in which eschar formation commonly seen because of its robust vascular supply and protection reflex of the patients. Although descriptive drawings and guides for facial escharotomy has not been published yet, relaxation of axial arteries in terms of compression due to eschar formation may be needed. In this report, a case of facial subunit principles based escharotomy is presented.

## Case Report

42 year old man fell into hot sand after having a vertigo attack while working close to iron processing zinc leded high blast furnace in an iron and steel factory. Sand which was used for isolation of the ground was placed 10 meters down the furnace and patient stayed approximately half minute in a prone position on the hot sand. Patient transferred to our burn unit for corresponding 35% of the total body surface burns on the face, total scalp, neck, anterior thorax and bilateral upper extremities although he had worn protective equipment. There was no capillary fill in the facial skin. Doppler ultrasound examination showed bilateral weak facial artery, temporal superficial artery, supraorbital and trochlear artery flow. A decision was made to perform escharotomy to relieve arterial traces at 10th hour of the injury. Bilateral nasolabial, infraorbital rim, superior glabellar, temporal incisions were performed from eschar to subcutaneous fat layer in accordance with aesthetic subunits.



**Figure 1:** Illustration of the escharotomy incisions from the anterior and lateral view. Bilateral nasolabial, preauricular, postauricular, infraorbital, frontal and neck incisions were performed down to subcutaneous fat layer. Dotted lines are illustrated in terms of increased intra orbital pressure. Lateral canthotomy can be combined with infraorbital incisions in such cases.



**Figure 2:** The clinical progress of the patient. The excessive swelling of the face can be clearly seen in the first picture on the left. Right after facial escharotomy (the second Picture). Early post operative days after skin grafting according to subunits. Escharotomy incisions were used as a guide for grafting and scars are well hidden (Third Picture). Post-operative second year of the patient with well hidden escharotomy scars (on the right).

## Conclusions

Facial escharotomy based on aesthetic subunit principles may affect the outcome by releasing axial arteries of the face. This maneuver may increase the amount of tissue to survive by releasing diminished circulation of the skin. Escharotomy of the face can help rapid edema relief and be a guide for skin grafting without incision related excessive scarring.