

**Noma - A Mysterious and Mutilating Disease****Prof. António Gentil Martins\***Department of Pediatric Surgery, Hospital de D. Estefânia  
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Estefânia Lisboa.**Submitted:** 2023, Aug 12; **Accepted:** 2023, Sep 15; **Published:** 2023, Sep 19**Citation:** Martins, A. G. (2023). Noma - A Mysterious and Mutilating Disease. *J Pediatr Neonatal Biol*, 8(3), 262-265.**Abstract***Two Patients having suffered from Noma, a mysterious and mutilating disease, predominant in low income Countries (namely from Africa), still of unknown origin and, requiring a difficult plastic surgical approach, are presented***Keywords:** Noma, Mutilating Disease, The Face of Poverty**1. Introduction and Objectives**

Noma is a gangrenous and necrotizing stomatitis, of uncertain etiology, starting as a periodontal infection and necrotizing gingivitis, having as predisposing factors, poverty, malnutrition, inadequate oral hygiene, imuno-deficiencies and debilitating diseases (ex.measles) been even called “the Face of Poverty” It is a mutilating disease, fortunately rare, destroying facial soft tissues and even bone, of unpredictable severity although auto-limited, and that still persists in developing Countries (having a mortality over 90%!) The children that survive have generally severe problems, like extensive facial mutilation, trismus speech difficulties and salivary reduction. This paper is aimed at emphasizing the place of plastic surgery repair.

**2. Material and Methods**

This paper is based on two black Patients with extensive loss of facial tissues.

**• 1st Patient**

With extensive destructive lesion of the right side of the face with loss of the right ocular globe. He had been undergoing treatment in his Country Hospital - 35, (?) “mainly limited”, surgical procedures, that allowed full wound healing, so that he could return to his home village, but suffering from a severe temporo-mandibular ankylosis (after an unsuccessful condylectomy). Nevertheless, the absence of teeth on the right side, was allowing him to eat. (fig.1)

**Figure 1:** Patient 1 Appearance after the “35” surgeries

Unfortunately, after his return home, the lesion returned. It was much worse, the time we took care of (Fig 2).



**Figure 2:** Patient 1 Initial Appearance After Recurrence

The more favorable areas had already been used in previous surgical procedures thus conditioning our options.

Reconstruction started with resection of the temporo-mandibular osseous block with interposition of a fragment of dermis (with the epidermis already removed). That was followed by raising a skin tube from the right dorsal region, externally based, so fashioning a double face skin pouch (through squinting of the more internal skin portion, associated with a median thickness skin graft. That was followed by elongation of the skin tube to allow that it would reach the right hemiface without tension and transferring it then to the facial wound and suturing its two faces, the inner one to the cheek mucosa and the outer one to the facial skin (fig 3)



**Figure 3:** Patient 1 Dorsal Donor Area Already Covered by Skin Grafts and Dorsal Tube already Totally Implanted in the Right Side of the Face

Later the base of that tube was sectioned and also implanted in the face, followed with reconstruction of the right upper lip, side ( associated with a commissurotomy ) and a reduction of the excessive facial skin volume by joining the proximal and distal segments of the skin tube. It was also tried to reconstruct the orbital edge to make possible the retention of an ocular prostheses. (Fig 4)



**Figure 4:** Patient 1 Final Result, with Satisfactory Retention of the Ocular Prostheses and Reasonable Functioning of the Mouth

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In the postoperative period he developed several infections requiring drainage more than once. In the last of these drainages a fragment of skin was discovered in the skin face, probably a residue of one of the “35” previous surgeries.

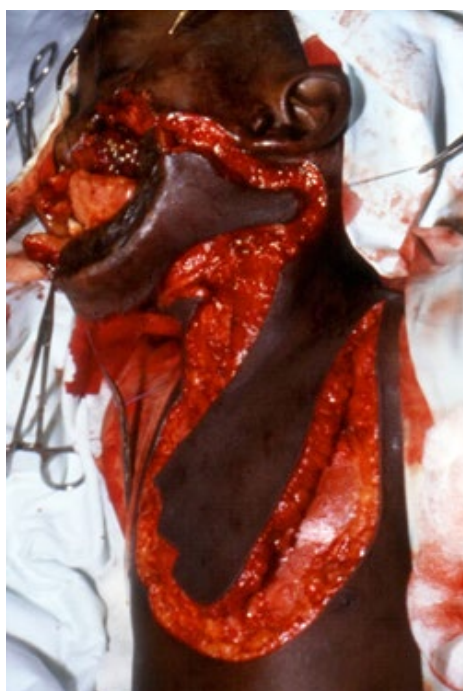
• **2nd Patient**

Extensive skin loss in the left face (fig 5),



**Figure 5:** Patient 2 Initial Appearance

But reconstruction in only one surgical intervention. Surgery was initiated by the inversion of a small flap taken from the mandibular and maxillary areas (fig 6)



**Figure 6:** Patient 2 Mandibular Flap and Cervicothoracic Flap

Mobilization of the sterno-cleido-mastoid muscle to support the left eye and rotation of a large cervico-pectoral flap (bifurcated at the tip for refashioning the labial commissure), the large donor area being covered with free grafts taken from the thighs.(fig 7)



**Figure 7:** Patient 2 Final Aspect (skin grafts not yet applied)

### 3. Results and Discussion

The immunology studies did not show any anomaly and the bacteriologic examinations just revealed the “usual” flora. Virology studies were also irrelevant. The disease, also known as “Cancrum Oris” is known for over 1.000 years and was recognized in 1994 by the WHO to be a Public Health Problem. The 1st Patient suffered 8 more surgeries but obtained an acceptable functional result (with a reasonable mouth opening, that allowed him to start dental rehabilitation and the possibility of complete mouth shutting and so avoiding saliva loss. The aesthetic result is certainly not ideal but the only possible.... The ocular prosthesis, now stable, minimizes deformity and he is now working in Informatics in but has not returned to his home town considering the danger of further problems.and also because he has no known direct family members.

### 4. Conclusions

It is important to emphasize that in these severe deformities the initial treatment must try to deal with all the existing problems and be in accordance with the complexity of the situation.. These two Patients demonstrate well the contrast between the two different criteria and approach. So the treatment should try to be radical from the very beginning, immediately after disease stabilization, what usually happens (although often with already severe mutilations) Not knowing the origin of the disease (prob-

ably an infective agent associated with an immunity deficiency) it should be recommended that those Patients should not return to their previous habitat considering the possibility of recurrence of the disease (as it happened with Patient number 1.

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