

RADIAL FOREARM FASCIOCUTANEOUS FREE FLAP AS A SOLUTION IN CASE OF NOMA

MASSIMO DEL BENE,¹ FEDERICO AMADEI,^{1*}
MAURIZIO PETROLATI,¹ LUCA VITTORIO ROVATI,²
PIER LUIGI CONFALONIERI,² and
ERNESTO PIETRO CARONNI²

The authors describe a case of Noma or Cancrum Oris, an oral gangrenous disease, features more frequently found in children from developing countries. The clinical features, its ethiopathogenesis, and its particular link with different geographic and economic areas of the world, its clinical evolution as well as surgical treatment are all discussed. Underlined is the functional and organic aspect of this disease, in particular the distortion of the face, which commonly involves the full thickness of the cheek skin and bone, mandibular ankylosis and craniofacial dysmorphisms, and the modern approach in reconstructive microsurgery. The authors report a case of a patient affected by Noma, with a very evident left face dysmorphism, where we found a brilliant solution using a left radial forearm fasciocutaneous free flap, appropriately shaped.

Gli autori descrivono un caso di Noma o Cancrum Oris, affezione a carattere gangrenoso del cavo orale, che insorge particolarmente in bambini provenienti da paesi in via di sviluppo. Vengono evidenziate le caratteristiche peculiari di questa patologia, la sua eziopatogenesi discussa, i suoi fattori predisponenti, la sua particolare correlazione con determinate aree geografiche ed economiche, la sua clinica, la sua evoluzione e la sua terapia. Viene posta particolare evidenza alle sequele organiche e funzionali della malattia stessa, in particolare deturpazioni del viso, come ampie perdite di sostanza a carico dei tessuti molli, ed a livello di danno osseo, anchilosi della mandibola e dismorfismi cranio-facciali, ed alla risoluzione delle stesse con le tecniche ricostruttive della Chirurgia Plastica. Viene descritto un caso di un paziente affetto da Noma, con esiti mutilanti l'emiviso sinistro che è stato sottoposto a ricostruzione dello stesso mediante lembo libero microchirurgico antibrachiale radiale sinistro, opportunamente modellato.

© 1999 Wiley-Liss, Inc.

MICROSURGERY 19:3-6 1999

Noma is an oral gangrenous infection, which derives its name from the Greek verb *devour* and a synonym used frequently in Anglo-Saxon literature to describe this dreadful pathology, *Cancrum Oris*.¹ Hippocrates² and Galen³ are the first to describe this disease; then we had to wait until 1948 for a French paediatrician, Tourdes,⁴ to identify and summarize it. This pathology first appears in the oral mucous, and in only a few days can cause a total destruction of the soft tissue of the lips and cheeks and erosion of the bone; in some cases the necrosis can extend from the neck up to the eyelids. At one time from 80% to 90% of the young patients died in the acute phase of the illness from malnutrition, pulmonary problems, and septicaemia; at present this percentage has fallen to 10% to 20%.⁵ Survivors show constant organic and functional sequelae—disfiguring scars, large loss of soft tissue in the cheek region, mandibular

ankylosis, which all disable patients to eat—as well as maxillofacial deformation that compresses the airway, with consequent obstructive respiratory defects.

The chronic sequelae of the acute disease process often requires reconstructive surgery. Newborn and small children are mainly affected, although recently adults with immunitary defects have been reported, especially patients with different hemopathy such as leukemia, with consequent postchemotherapy aplasia,⁶ AIDS clinical patients,^{7,8} and patients with different infectious diseases, such as measles and malaria.⁹ Children are the most affected and development at the maxillofacial level, in these cases, is dysmorphic. Emiatrophy and severe dysmorphism of the face are constantly present. This disease mostly affects malnourished children.^{10,11} It has a higher incidence in developing countries and above all in Africa and Asia: Somalia, Mozambique, Morocco, Algeria, Madagascar, Nigeria, Senegal, Vietnam, Nepal, India, and Cambodia.¹² In Europe, the last documented cases are those after an epidemic of measles, in 1909–10 in Great Britain,¹³ and also in World War II prisoners released from German concentration camps.¹⁴ The conditions and factors that increase the risk of Noma are the following: populations who live in

¹Unità Operativa di Chirurgia Plastica e della Mano Ospedale di Legnano (MI), Azienda, Italy

²Unità Operativa di Chirurgia Plastica e Maxillo-facciale Azienda Ospedaliera "San Gerardo" di Monza, Italy

*Correspondence to: Federico Amadei, Via Roma 76, Legnano (MI) 20025, Italy.

