

## LETTER TO THE EDITOR

## Microsurgical reconstruction in the time of COVID-19

Dear Editor,

By April 11, 2020, 1,610,909 COVID-19 cases have been reported globally, causing 99,691 confirmed deaths ([www.who.int/emergencies/diseases/novel-coronavirus-2019](http://www.who.int/emergencies/diseases/novel-coronavirus-2019)). The government imposed a lockdown and all health-care institutions are taking precautions individually (Iacucci, 2020).

ASUGI, our health-care institution, suspended all elective and non-oncologic surgical procedures. For this reason, the plastic and reconstructive surgery unit is screening pre-operatively all patients, candidates for non-deferred surgery; this screening consists of: swab for COVID-19 infection, physical examination, temperature assessment, chest X-ray, ECG, blood chemistry tests, recent history of respiratory symptoms, GI symptoms, headache.

In March 2020, a 50-year-old woman presented in our Plastic Surgery Clinic, with a 3 × 2.5 cm oral cavity cancer. A CT scan with contrast was performed and confirmed the presence of a lesion involving the floor of the mouth, the symphysis of the mandible and the left neck lymph nodes. It is well known that timely start of surgical treatment is associated with higher survival rates in patients with head and neck cancer (Graboyes et al., 2019).

Based on these premises, Plastic and ENT surgery units agreed to operate the patient on April 1. Before the operation, the patient performed all requested pre-operative screening tests. Testing for COVID-19 was negative. In the OR, during the intubation and extubation, all health staff wore personal protective equipment (PPE). We performed a wide tumor excision, marginal mandibulectomy, bilateral functional lymph node dissection and soft tissue reconstruction with an ALT free flap.

In the post-operative period the patient spent the first night in a dedicated intensive care area, she was monitored with Licox PtO<sub>2</sub> system (Arnez, Ramella, Papa, Novati, et al., 2019). After she was transferred to Plastic surgery unit, where she remained isolated for a further 7 days, until her second Covid-19 testing was found negative. The post-operative period was uneventful and without any complication.

In April 2020, an 80-year-old man was admitted to our ER, with a Gustilo IIIA open tibial fracture after fall from high. The patient had metastatic urothelial cancer and was positive for COVID-19. Our orthoplastic protocol (Arnez, Ramella, Papa, Galici, et al., 2019) consists of the first debridement, temporary bone fixation and coverage within 24 hr of trauma, followed by the definitive bone fixation and soft tissue coverage within 7 days after trauma. In this case, the first surgery was technically demanding due to the use of the PPE, impossibility to wear magnification loops and difficult communication between the members of the surgical team. For these reasons and for the patient's comorbidities, we decided on conservative non-microsurgical treatment (debridement, external fixation and direct closure of the wound) to simplify the postoperative management of the Covid-19 positive patient.

Microsurgical free flap reconstructions are demanding surgeries that require long OR times and often intensive post-operative care in ICU units. In this period of constrained resources, and necessity of wearing additional protective equipment, microsurgical reconstruction must be performed but only after careful case-by-case assessment because, even during Covid-19 pandemic it is imperative for then health systems to guarantee the patients the best treatment. In borderline cases, when possible, in view of many additional difficulties, we suggest a more conservative approach.

## CONFLICT OF INTEREST

The authors declare no conflict of interest and no financial disclosure.

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