



COVID19 and Epistaxis

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Cases of pneumonia of unknown origin caused by a new coronavirus, SARS-CoV-2, were detected, in the Chinese city of Wuhan in December 2019, it has evolved rapidly into a public health crisis and the epidemic is declared on January 31, 2020, by the World Health Organization (WHO) and a pandemic on March 11 because has spread exponentially worldwide [1].

Medical professionals caring for COVID-19 patients are at high risk of contracting the infection, since the high virulence and the occurrence of contagion from asymptomatic patients. The SARS-CoV-2 virus affects the respiratory tract, with symptoms, such as a dry cough, fever, odynophagia, loss of smell and taste, and improves without the need for treatment. A percentage of patients with serious complications: pulmonary edema, severe pneumonia, acute respiratory failure [2] accompanied by thromboembolic complications.

Person-to-person transmission occurs between days 2 - 10 during the asymptomatic incubation period of COVID-19 [3,4]. Through expired droplets, contact with contaminated fomites and inhalation of aerosols with the virus, especially in closed and poorly ventilated environments [5,6].

The diagnosis is made through the RT-PCR test, of samples taken from the nasopharynx and oropharynx in the first days of infection. In those patients admitted to the ICU, the test is more sensitive when performing a tracheal aspirate or bronchoalveolar lavage [7,8].

Epistaxis as a symptom

Epistaxis is a common complaint in the general population that is treated by the otolaryngologist, it is also a common procedure in emergency departments, it is believed that 60% of the world

population will present a bleeding episode [9]. Epistaxis (uni or bilateral/anterior or posterior) can be triggered by multiple local factors: trauma, allergies, drugs, narcotics, infections, and neoplasia, as well as systemic factors such as high blood pressure, blood clotting disorders and drug use (blood thinners, acetylsalicylic acid, nonsteroidal anti-inflammatory drugs) [9,10].

The management of epistaxis will depend on the amount of bleeding, mild nosebleeds include non-invasive procedures such as bi-digital compression in the lower third of the nose and the placement of oxymetazoline drops, which is recommended before attempting invasive procedures. In case of not improving, proceed to cauterize (silver nitrate, electrocautery), anterior nasal packing (gauze, merocelR, rapid rhinoR), or posterior, however, 1% of patients end up in surgical intervention (cauterization, neck surgery), selective embolization (sphenopalatine artery) to control epistaxis [2].

Epistaxis represents approximately 0.5% of the illnesses treated in emergencies [11], therefore clinical recommendations are made to minimize the risk of infection when treating epistaxis in the emergency room.

Recommendations in times of COVID19

All patients to be treated with epistaxis should be considered COVID-19 positive. The use of filtering masks FFP3 (Europe) or N99 (USA) is recommended, in the absence of these, FFP2 or N95 masks can be used [12]. Disposable equipment such as a surgical cap, surgical lenses or a face shield, nitrile gloves, double gown, and overshoes are recommended for safe dressing [13].

The otorhinolaryngologist and the nurse, with experience in epistaxis treatment, participate in the procedure with personal

protective equipment for their care in the consultation area or the emergency room. Patients must wear a surgical mask that covers the mouth.

Before starting the clinical assessment, all patients should be asked about risky contact with COVID-19, and if they have any symptoms. The patient with a sudden loss of smell and/or taste should be considered at high risk for COVID 19 infection. The ENT evaluates the severity of the epistaxis if it is active if it presents prolonged bleeding, bilateral anterior or posterior bleeding, signs of acute hypovolemia (tachycardia, syncope, orthostatic hypotension) will be treated immediately.

Those patients with mild epistaxis can be treated non-invasively such as bi-digital nasal compression, nasal drops, before attempting invasive interventions: cauterization or tamponade as required. In case of severe bleeding that warrant the use of the operating room, the staff of the area will be counted on, before entering to perform surgery, COVID19 tests must be performed before any procedure for posterior epistaxis such as cauterization or sphenopalatine artery embolization.

The Academy of Otorhinolaryngology-Head and Neck Surgery has shown in various studies during nasal endoscopy with cauterization, significant amount of airborne aerosols is produced [14]. Due to this, we would avoid nasal endoscopic control of posterior epistaxis with clipping or cauterization of the sphenopalatine artery. Embolization may be the best option for these COVID-19 positive patients with posterior epistaxis.

Conclusion

Epistaxis patients should be considered COVID-19 positive.

The Otorhinolaryngologist is exposed to the risk of contagion by COVID-19 during the treatment of epistaxis due to the highly virulent nature of COVID-19 in respiratory droplets and nasal secretions.

The correct use of PPE (N95 mask, surgical cap, face shield, surgical gown, gloves) is essential for the protection of the healthcare personnel and the patient with epistaxis. The use of filtering masks is recommended, as all patients, should be treated as COVID-19 positive in the emergency department.

The safety of healthcare workers is essential to limit transmission of the virus.

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