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## Influence of the containment on the epidemiology of maxillo-facial emergencies during the COVID-19 pandemic. Why no more cellulites of odontogenic origin?



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A pandemic due to a new virus, the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and its related pneumonia coronavirus disease 2019 (COVID-19), is currently challenging the French healthcare system and medical community [1]. Many measures have been taken by the French health authorities to slow the rapid spread of the pandemic. A containment of the population has been set up since the 17th March 2020 and is still ongoing. People are only allowed to leave their home in a few situations: to go working (if not possible to work at home), to attend to a medical consultation, for compelling family motive and to walk not more than 1 km away from home. Other measures have been taken, mainly: closure of all primary and secondary schools, colleges and universities, of every bars, hotels and restaurants, prohibition of any assembly over 20 individuals and prohibition of religious ceremonies. Consequently, it is not possible any more to go out at night for entertainment or to practice other sports than running, for example.

Moreover, the whole medical activity has strictly been limited to emergency cares. In the field of oral and maxillo-facial (OMF) surgery, it concerns mainly cases of facial traumatism, facial cellulites and cancers. French dentists have also been told to manage exclusively emergency dental cares. They are thus no longer allowed to perform any standard dental cares. Major changes in the usual emergency activities have been observed during that containment period. In the hospital of Angers (France), a major decrease of the incidence of facial fractures and cervico-facial cellulites of odontogenic origin has been observed. During an almost eight weeks period (between March 9 and April 30 of 2020), no patients were managed for a collected cellulitis in our structure whereas at the same period of the years 2019 and 2018, the average incidence of cellulites was approximately 1 patient per week (1 patient every 6.6 days). The average incidence of facial fractures needing surgery was estimated at 1 patient every 13.25 days during the containment period whereas it was 1 patient every 2.65 days at the same period of the years 2019 and 2018.

As it could be expected, the number of facial fractures has been drastically reduced. It can be explained by factors related to the current containment period. People do not practice sports with high risk of facial trauma anymore (especially contact sports). People do not go out at night anymore, especially in places at high risks of facial trauma due to assaults (mostly nightclubs or pubs). And, of course, there are much less road accidents than usual since the number of journeys by car has obviously considerably decreased.

However, this non-expected ascertainment came to the mind of many OMF surgeons: where are all the cellulites gone? Indeed, it is really surprising to note that the incidence of cervico-facial cellulites of odontogenic origin has drastically reduced since the beginning of the containment. At first sight, it seems that no influence on the development of a cellulitis is to be expected from

the current containment measures. However, we think that a few hypotheses can be raised.

The dentists' activity has been refocused on dental emergencies. With this suspension of all the routine dental care, it is likely that more patients needing emergency dental cares than usual can be seen by dentists. It probably allows patients to receive earlier adapted antibiotic therapy than usual in case of dental infections. This fact is supported by the literature: an increased proportion of infections has been showed during the epidemic in patients visiting dental urgencies [2]. On the contrary, the hypothesis of a management of patients with cellulitis by private practice OMF surgeons must be rejected. Indeed, it appears that, in our area, no patients at all have been managed for that disease in private hospitals during this period.

A last hypothesis could be evoked. To date, whether concomitant non-steroidal anti-inflammatory drugs (NSAID) treatment may be harmful or safe in patients with COVID-19 is still controversial [3,4]. Despite this fact, the idea that the use of NSAID leads to an increased risk of severe forms of COVID-19 and of fatality is widely spreading among the population. And it seems to be widely acknowledged that many people have stopped to use NSAID, especially in self-medication. In France, a 60% decrease of NSAID delivery by drug stores and pharmacies has even been observed at the end of march 2020 (i.e. from the beginning of the containment period) [5]. This fact is thought to be due to a cautionary note regarding the use of NSAID during the COVID-19 pandemic and coming from the French health authorities and broadcasted by the media [5]. Yet, the influence of NSAID on the development of cervico-facial cellulitis of odontogenic origin is still controversial today [6,7]. The hypothesis of a diminution of the number of cellulites of odontogenic origin, due to the decrease of the use of NSAID related to the COVID-19 pandemic, must be taken into account according to us. The hypothesis of a positive role of NSAID on the development of cellulites could thus be reinforced. Further investigations, with multicentric assessment, are currently in progress. Anyway, it would be of great interest to find out the reason of that decrease of the incidence of cellulites in order to improve the prevention of this disease in the future.

#### Disclosure of interest

The authors declare that they have no competing interest.

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