

## Editorial

# Please help us !

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Oral and dental management of patients with high risk of infective endocarditis (IE) raises several questions for professionals of the oral sphere since many years. Some recommendations for good practice in our professional domain exist. They have evolved a lot over more than ten years, in particular with regard to the definition of the group of patients most at risk, about the methods of prescribing antibiotic prophylaxis and about the feasibility of some oral and dental procedures. In France, the latest recommendations concerning oral and dental practice in different groups of patients according to the risk of IE were published by the National Agency of Drug Safety in 2011 [1].

Since then, it has been proposed by the European Society of Cardiology (ESC) in 2015 to open up some oral and dental procedures, dental implant treatments in particular, that have so far been contraindicated in patients at high risk of IE [2]. This evolution is explained by several arguments, in particular:

- Invasive dental procedures have long been considered solely responsible for oral streptococcal bacteraemia implicated in approximately 30% of IEs. This idea has recently been nuanced by the demonstration of transient daily bacteraemia linked to brushing and chewing activities, the cumulative intensity of which appears to be higher than that generated by a number of invasive oral procedures [3,4].
- Very few IE episodes are correlated with invasive dental procedures. Poor oral hygiene and subsequent periodontal inflammation are recognized as major risk factors for IE [5,6]. And oral prevention measures are now very clearly promoted by most of the healthcare agencies to limit the risk of IE episodes in patient at high risk of IE.
- A variable attitude within Europe and in the world concerning the oral and dental procedures authorized in these patients at high risk of IE has been observed [7]. All the current guidelines promote systematic detection of oral infectious foci and elimination of all of them in IE patients, but the modalities for screening and managing these infectious foci are not consensual and/or inconsistent.

- Analysis of the literature highlights the very low bacteraemia induced by oral and dental procedures currently contraindicated in patients at high risk of IE [1].

Following the European opening to implant practice in patients at high risk of IE, some French Societies of specialized medical providers (Cardiology, Thoracic and Cardiovascular Surgery, Infectious Pathology) requested that a multidisciplinary working group led by oral surgeons proposed a prudent and reasoned approach to implant procedures in patients at high risk of IE [8].

On this occasion, the work of reviewing the literature on bacteremia caused by procedures other than implant surgery, which are still contraindicated in this population (such as the majority of endodontic treatments), has given rise to certain questions since several results underlined that the most would not induce significant bacteraemia. The possibility of such procedures in these patients at high risk of IE (including in the pediatric population) must therefore be explored. Beyond that, this working group should also specify the feasibility of other bacteremic oral procedures that are contraindicated in this population (peri-apical surgery, periodontal surgery) in the light of current scientific literature. This list of dental and oral procedures still contraindicated has not been updated since 2002, the date of a consensus conference by the French Society of Infectious Pathology [9].

So many questions that generate confusion or even therapeutic errors. It is now urgent to undertake broader and more in-depth work upon the label of the French National Health Authority, on the updating of dental and oral practices in patients with high risk of IE based on a multidisciplinary approach. This would guarantee a rigorous methodological approach and national dissemination which could ultimately only benefit these patients at high risk of IE. In addition, this work could also identify probable insights for clinical research.

To help us successfully, this work should answer to many questions about this population at high risk of IE and about feasibility of oral and dental procedures in this population:

- Which patients are really at high risk IE and what are the risk factors associated with them?

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- What are the oral and dental procedures at risk of bacteremia and therefore of E.I.?
- What are the indications, precautions and contra-indications (adults and children) for these procedures in patients at high risk of IE?
- When to use antibiotic prophylaxis and how (choice of antibiotic, dosage, duration, etc.) depending on:
  - Oral and dental procedures
  - Population concerned
- What are the long-term follow-up and complications of oral and dental procedures for patients at high risk of IE?
- What oral check-up and management should be carried out in patients undergoing cardiac surgery likely to expose the patient to a high risk of IE?

This is a urgent need and please help us, our patients request the most effective oral and dental management.

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