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Dr Rolf Vollmer

Implantology & Education

_**As 2015, an eventful year of implantology,** is coming to a close, a review on the DGZI's activities shows its great dedication to implantology. The German Association for Dental Implantology (DGZI) has been active both in Germany and abroad and its cooperative partners, its various resources and concepts will make sure that the DGZI continues to be a significant influence on implantological education around the world.

A special concern of the DGZI's activities this year was the promotion of dental technologies with regard to a successful implant therapy. This year's 45th International Annual Congress, which was visited by more than 350 participants, was therefore dedicated to the interface between dental technology and implantology. International attendees were able to participate in all specialist discussions and to present their own key topics with the help of interpreters and special international podiums.

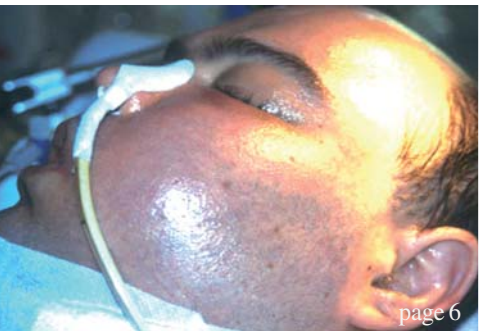
We already look forward to welcoming the participants at next year's workshops and our International Annual Congress, which will take place in Munich from 30 September to 1 October 2016. Thus, you can expect a special Octoberfest Congress on the last weekend of the "Wiesn".

In addition, I would like to thank you all for the provision of various specialist articles this year and ask you to continue your expert work for implants **international magazine of** oral implantology. Like in the previous years, all articles will be reviewed by our scientific committee.

Moreover, implants **international magazine of** oral implantology is distinguished from other publications by presenting controversial topics. A lively discussion and even occasional topic-related disputes among colleagues form an important part of striving for the best-possible therapeutic approaches in implantology.

The members of the DGZI board hope you will enjoy reading this year's final edition of implants **international magazine of** oral implantology and wish you a happy and peaceful Christmas as well as a good start to 2016._

Dr Rolf Vollmer
First Vice-President and Treasurer of the German Association of Dental Implantology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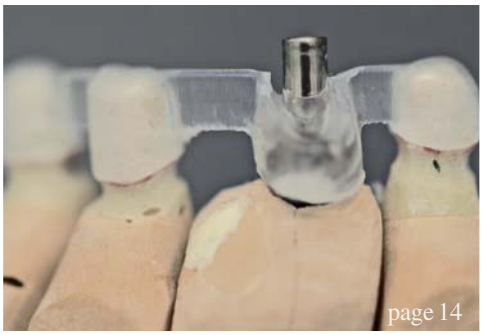
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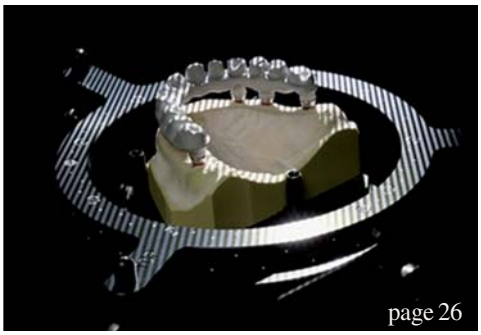
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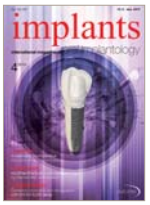

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Incidence of postoperative infections in dental procedures

Author_Prof. Mauro Labanca, Italy

_The risk of post-surgical infections in dental surgery and the management of the same has been widely studied and referenced in medical literature.[1]

Actually, it is known that in order for any surgical wound to heal properly and in a predictable manner, two conditions that I would define as "milestones" must be met: the wound should be protected from any trauma and prevent superinfection of the same. These two conditions can hardly be met in the oral cavity. It is well known that the oral cavity, which is the first section of the digestive system, is an intrinsically contaminated environment and the risk of infection during intra-oral surgery is increased compared to other types of surgeries and comparable to surgery on the intestine. In fact, it is practically impossible to ensure an aseptic environment due to the large number of microorganisms present in the oral cavity; as we all know, bacteria, fungi and protozoa live in the soft tissues creating a biofilm. The life cycle of the biofilm depends on the attack, the colonisation and the proliferation of these micro-organisms.

Common bacterial flora in the oral cavity is variable and consists of aerobic and anaerobic bacteria with pathogenic potential.[2] Temporary reduction of the amount of such bacteria may reduce the risk of post-surgical infection.[3]

Therefore, before performing a surgical procedure, it is essential to consider that the wound is never sterile and when subjected to an infection, the latter is due to perioral skin microflora.

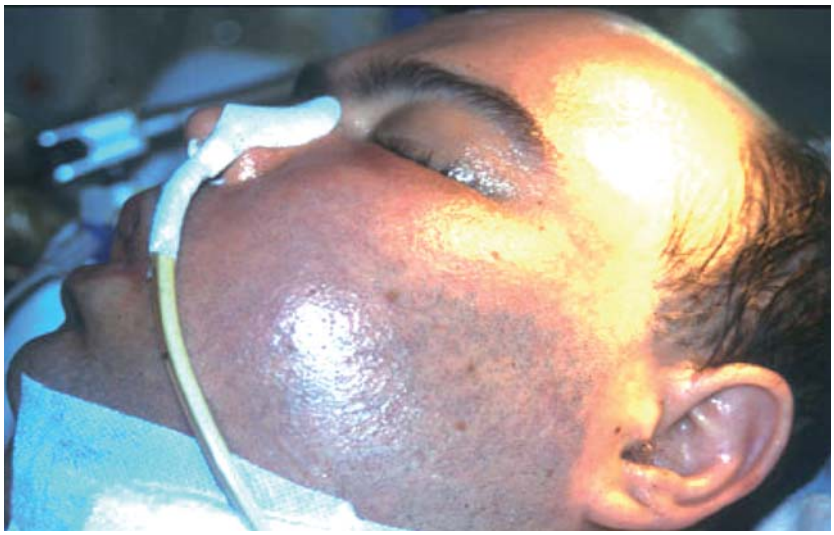

Fig. 1_Severe facial infection after mandibular third molar extraction.

Moreover, surgical wounds caused by dental surgery are continuously subjected to trauma: mastication, dental prosthesis, movement of the tongue or perioral muscles. In fact, this involuntary and persistent trauma cannot be eliminated in any way and, obviously, affects significantly the wound healing time.

Speaking with my youngest colleagues as well, they usually pay a great deal of attention to the operating sequence ignoring the key factor that conditions the outcome of the intervention: the proper healing of the wound. In fact, if there is a superinfection of the wound with consequent dehiscence of the flap, the intervention itself and/or the grafted material are likely to turn into failure or unsuccessful operation. Therefore, it is critical to set wound healing as the main goal

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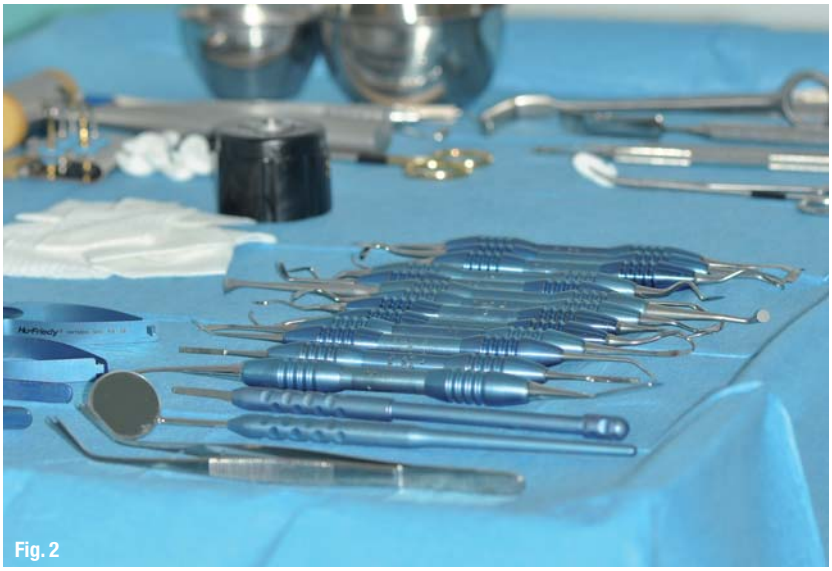
Fig. 2

Fig. 2_Adequately prepared surgical table.

and make sure the wound is protected against superinfection and trauma, although it is located in a dynamic and contaminated environment.

But how can a post-surgical infection be prevented?

Based on medical literature and my extensive experience as an ER surgeon and dental surgeon, I think that there are different parameters to take into consideration when performing a dental surgery: the experience of the surgeon, the duration of the surgery itself, the concomitant risk factors, the aseptic conditions of the operating field and the careful selection of the materials used.

It is also essential to keep in mind that oral surgery is not just about implants or various regenerative techniques. Even a seemingly common avulsion can be fully considered a surgical intervention, hence subject to infection with more or less serious side effects for the patient (Fig.1).

Fig. 3_Incorrect preparation of a surgical table.

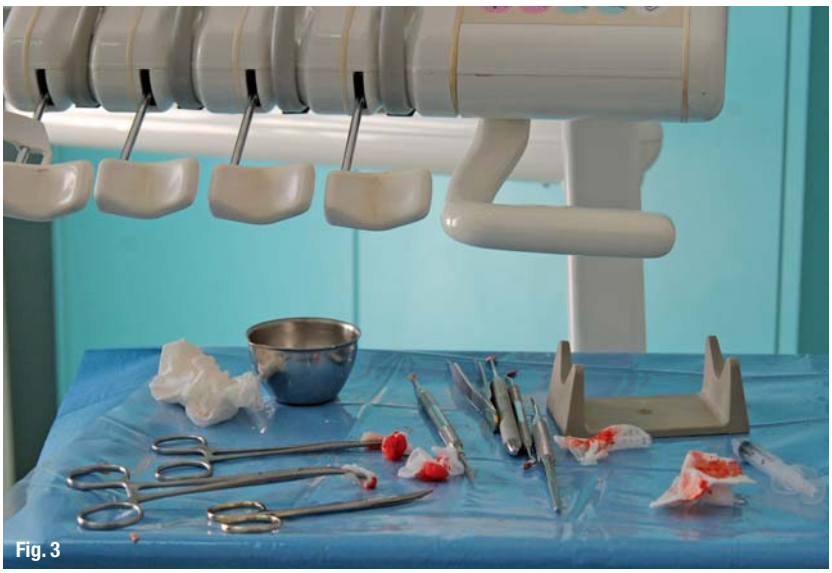
Fig. 3

We will now review the above risk factors for an in-depth examination of every single situation.

_Experience

Experience proves to be the most important factor in a successful outcome of a surgical intervention. It has been reported that the risk of infection in the case of less experienced surgeons is four times higher compared to that of more experienced surgeons.[4] Nevertheless, experience is definitely not a parameter that can be changed (unless by aging and through hard work!) but it is necessary to take note of it, and then young colleagues who face surgery should pay more attention to their work aware of this aspect.

_Duration

In defining the duration of the intervention, there are two factors that must be considered: the duration, in a relative sense and in an absolute sense. The absolute value indicates the time required for the execution of the surgical procedure in optimum conditions by a surgeon with adequate experience. Virtually, the right execution time, with no rush but also without unnecessary expenditure of time. On the other hand, when lack of experience or insecurity lead to extended duration, we talk about relative value: basically, it is the time actually spent but that could have been reduced. It has been reported that a duration of the intervention below one hour poses a risk of superinfection of 1.3 %, while such risk is increased to 4 % if the intervention lasts for about three hours. Every additional hour doubles the risk of superinfection[5]. Once again, it should mentioned that these values refer to the correct duration of the intervention. To clear this up, if an intervention executed correctly lasts one hour, the risk is 1.3 %, if it lasts three hours, the risk rises to 4 %. But if the relative intervention can be done in one hour, but it takes three hours due to surgeon's lack of experience, the risk of infection increases considerably beyond the above said 1.3 %.

_Systemic factors

There are systemic factors that promote superinfection of the blood clot including uncompensated diabetes (which also prolongs healing time much more than usual), autoimmune and systemic disorders, and smoking.[6,7,8] Concomitant use of drugs should also be carefully considered to avoid that some of them could heavily interfere with the healing process (just think of the bisphosphonates, a problem that is more and more present in our clinical activity). The age of the patient should also be carefully evaluated; during the avulsion procedure of a third molar, the risk of post-surgery complications is of 10 % in twenty-years-of-age patients and 30 % in a 40-year-old patient.[9] Actually, age involves very often the use of medicines and impaired

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