

# Are regenerative measures possible in bisphosphonate patients?

Bisphosphonates (BPs) have been used successfully for 20 years in the treatment of bone tumours, hypercalcaemia syndrome, Paget's disease and osteoporosis. BPs reduce osteoclastic resorption in particular. In 2003 the first case reports of jaw necrosis with BP medication appeared.<sup>1</sup> The majority of documented cases of bisphosphonate-associated osteonecrosis (BON) in the jaw were diagnosed after a dental surgical operation.<sup>2</sup>

## Results

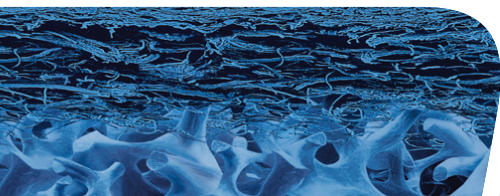
- Bisphosphonates, as described above, are very useful if they are used for the correct indications.<sup>3</sup>
- For BP patients who have to undergo surgical dental treatment, there is an increased risk of jaw necrosis.
- There is evidence that this is a multifactorial event (incl. bacterial colonisation, soft tissue and bone wounds, head and neck radiotherapy, bone destruction due to endosteal metastases, systemic chemotherapy).<sup>1</sup>
- Besides the listed cofactors, the route of administration (oral vs. intravenous), dose, duration of therapy, presence of underlying malignant disease and type of BP have a sustained influence on the individual patient risk profile.<sup>1</sup>
- Patients with suspected BON should be referred to the appropriate university centres of oromaxillofacial surgery.<sup>4</sup>

## Conclusion

- It is assumed today that generally employed biomaterials neither cause BON nor influence its course.
- Caution is warranted: BPs cause slowed bone metabolism and so interfere with the healing of implants.
- There is as yet no evidence-based protocol for the treatment of BON. Much is still empirical. However, in principle, patients should be informed (there are corresponding information sheets)<sup>5</sup> and there should be close recall.
- To determine whether regenerative measures are indicated, the individual patient risk profile should be noted.
- Increased interdisciplinary cooperation between oncologists, oromaxillofacial surgeons and dentists is also necessary.<sup>4</sup>

## References

- 1 Scientific statement, German Society for Dental, Oral and Maxillo-mandibular Medicine, 2006.
- 2 American Dental Association, Expert Panel Recommendations: Dental Management of Patients on Oral Bisphosphonate Therapy, 2006.
- 3 Leon A. Assael. J Oral Maxillofac Surg 64:877-879, 2006.
- 4 BON – State of Art in Diagnostik und Therapie, Schweiz. Monatsschr Zahnmed, Vol 116.
- 5 Information available from the appropriate associations and societies.



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