Study raises questions about bisphosphonates

By John Hoffman, News Editor, Dental Tribune

The American Society for Bone and Mineral Research (ASBMR) has published a report showing that patients receiving high doses of bisphosphonates, a class of drugs widely prescribed for strengthening bones, are at a greater risk of developing osteonecrosis of the jaw (ONJ).

However, the risk to patients receiving oral bisphosphonate therapy is low. Around 23 million Americans take oral bisphosphonates for osteoporosis, according to the American Dental Association.

ONJ was first reported among cancer patients receiving high doses of bisphosphonate drugs as part of their treatment. The disorder typically appears as an area of exposed bone in the lower and upper jaw often developing after tooth extraction, mouth injury and dental surgery. Some cases occurred as a result of no known injury.

"Although osteonecrosis of the jaw is rare in people taking low dose oral bisphosphonates for osteoporosis, we need more research to identify the risk factors and determine if changing the dosing schedules of bisphosphonates could reduce the incidence of ONJ," notes Elizabeth Shane, M.D., immediate past president of the ASBMR.

Researchers uncover new clues to periodontal disease

LOUISVILLE, Ky.– Researchers at University of Louisville School of Dentistry have learned that a common bacteria of the mouth, Porphyromonas gingivalis, may be circumventing the body’s immune system by “tricking” white blood cells and then hijacking the cells to ensure its own survival.

The finding is important because P. gingivalis is a leading cause of periodontal diseases, a proven contributor to the destruction of gum, bone and teeth. The bacteria is also believed to play a role in heart disease, stroke and other serious health problems.

UL associate professor George Hajishengallis found that P. gingivalis uses a receptor, CR3, on the bacteria-eating white blood cells of our immune system to circumvent the body’s defenses and flourish in dental plaque.

Hajishengallis and his team are conducting tests to see if blocking CR3 with an inhibitor will control periodontitis and associated diseases. Similar inhibitors may also be useful in other inflammatory or autoimmune diseases such as psoriasis and forms of cardiovascular disease.

Use of PRF in bony regeneration surgery

By M. del Corso, J. Choukroun and D. Dohan, France

Platelet-rich fibrin (PRF) can be regarded as an autologous healing biomaterial, incorporating leukocytes, platelets and the majority of the molecules that take part in the tissue healing processes within the autologous fibrin matrix. In this article, the clinical and biological aspects of the action of PRF on bone regeneration in the various fields of application in oral surgery are analyzed.

The search for protocols promoting hemostasis and healing is a recurrent problem in all surgical disciplines. Thanks to the work of Lynch, there has been interest in growth factors in peri-implantology, and Marx in 1998 published the first studies on the use of platelet growth factors in the form of platelet-rich plasma. Since then, platelet aggregates of biological quality high in cytokines have been used in a large number of clinical situations.