Radikal bebas pada gangguan fungsi sendi rahang

Abstrak

In human, the temporomandibular joint (TMJ) has been proven as a stress-bearing joint, especially during mastication. Overload of shear stress on the joint can cause degenerative diseases of the joint, such as osteoarthrosis or TMJ osteoarthritis (TMJ-OA). Free radicals have been assumed to be associated in the pathogenesis of various degenerative diseases of the joint and oxidative stress is important in the mechanism of TMJ dysfunction. Free radicals are superoxide (O2-), hydrogen peroxide (H2O2) and hydroxyl (OH-), and are called reactive oxygen species (ROS). Hydroxyl is most destructive in patients with TMJ dysfunction. ROS exert their effects on TMJ by reducing the viscosity of synovial fluid, decreasing joint surface lubrication, breakdown of collagen and proteoglycan, and increasing the activity of cartilage degradation enzymes such as metalloproteinases.