

ABSTRACT

Inflammation is a local host defense mechanism from injured in living tissue or cell. Inflammation occurs because of irritation, trauma, and infection, which causes Cardinal Sign, id est rubor, calor, tumor, dolor, and functioles. Inflammation like gingivitis, produces free radicals molecule. Free radicals is a derivat molecule, having one or single or more electron which is not coupled in the outer layer orbit, the structure makes these electrons very reactive which can damage organism's tissue and cell. In free radicals and PUFA (Polyunsaturated fatty acid) reaction, cell membrane produces MDA through lipid peroxidation. MDA acts as indicator for free radical's activity. High concentration of MDA is an indication of high level cell damaged. To inhibit the negative impact of free radicals, an important substance called antioxidant is needed. Antioxidant is a molecule which structure can deliver its electron (electron donor) to free radical molecule without disturbing its function at all, and break the chain reaction of free radicals. One of popular antioxidant known is vitamin C. Vitamin C as an antioxidant can protect cell by inhibiting bad free radical effect through decreasing MDA concentration.

Key words: *inflammation, gingivitis, free radicals, MDA, antioxidant, vitamin C.*