



The anti-oxidative effect of propofol in cardiovascular system

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The effects of anesthetic on oxidative injury are of considerable scientific and clinical interest. Propofol used as an anesthetic agent for more than twenty years; alternatively, it has been registered for use as a sedative in the intensive care unit setting because it is easy to administer and to monitor, and also because of its simple onset and offset. Propofol also is an antioxidant.

The antioxidant effect of propofol may be attributable to the ability of propofol to capture electrons from free radicals and become a relatively stable intermediate by virtue of its phenolic structure. Propofol seems the most versatile in their potent antioxidant properties; at same concentrations; as compare to butylated hydroxyanisole (BHA), butylated hydroxytoluene (BHT) and α -tocopherol, propofol was shown that it had effective reducing power, DPPH (1,1-diphenyl-2-picrylhydrazyl) free radical scavenging, superoxide anion radical scavenging, hydrogen peroxide scavenging and metal chelating activities.

Propofol possesses an antioxidative effect, and immunomodulation implies that it may have potential benefits on cardiovascular diseases. We discuss and focus on some of the antioxidant properties of propofol in cardiovascular experimental models and if they may be considered efficient therapeutic effects in counteracting oxidative stress during general anesthesia and sedation in ICU, even though use as an clinical antioxidant in the future.

Reference:

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