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Review

Activity of essential phospholipids (EPL) from soybean in liver diseases

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Abstract:
Essential phospholipids (EPL) contain a highly purified extract of polyenylphosphatidylcholine (PPC) molecules from soybean. The main active ingredient is 1,2-dilinoleoylphosphatidylcholine (DLPC), which differentiates it from other phospholipids, lecithins, or extracts from other sources. Although EPL is widely used in liver diseases of various origins, its mode of action and pharmacological and clinical evidence of its efficacy have not yet been concisely reviewed. This paper critically summarizes experimental and clinical results.

With regard to *in-vitro* and animal tests, EPL influenced membrane-dependent cellular functions and showed anti-oxidant, anti-inflammatory, anti-fibrotic, apoptosis-modulating, regenerative, membrane-repairing and -protective, cell-signaling and receptor-influencing, as well as lipid-regulating effects in intoxication models with chemicals or drugs. Clinical studies, primarily from European and Asian countries, have shown improvement in subjective symptoms; clinical, biochemical and imaging findings; and histology in liver indications such as fatty liver of different origin, drug hepatotoxicity, and adjuvant in chronic viral hepatitis and hepatic coma. The available studies characterize EPL as evidence-based medicine, although further long-term controlled clinical trials are required to precisely determine its benefit for alleviating symptoms, improving well-being, inducing histological changes and slowing the progression of liver disease. EPL-related relevant side effects were not observed.

Key words:
essential phospholipids, membrane therapy, fatty liver, chronic hepatitis, intoxication, radicals, fibrosis