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Neem, Ulcers & Pain

By John Conrick

Terrifying reports of prescription painkillers that put users at greater risk of heart attacks and stroke have dominated news media over the past few months. Medications like Vioxx and Celebrex, drugs called cox-2 inhibitors, were once hailed as lifesavers because they are less likely to cause gastrointestinal bleeding than other pain relievers.

Concurrently – although with much less fanfare in the news media – a series of reports from India and Hong Kong is showing that neem extracts, specifically neem bark extracts, have potent antiulcer properties.

Most common pain relievers including aspirin and ibuprofen are part of a class of medications called non-steroidal anti-inflammatory drugs (often abbreviated as NSAIDs) that are highly effective but can cause gastrointestinal irritation and occasionally life-threatening ulcers. That's because they may damage the protective mucous layer of the stomach, allowing stomach acids necessary for digestion to further injure the stomach's lining.

A 2004 clinical study at the Indian Institute of Clinical Biologyⁱ indicates that neem bark causes significant decreases in gastric acid secretion (77%), as well as gastric secretion volume (63%) and pepsin activity (50%). Multiple cases of duodenal ulcers were almost completely healed (as confirmed by barium x-ray or endoscopy) at doses of 30 to 60 mg of neem bark twice daily for 10 weeks. One case of esophageal ulcer and one case of gastric ulcer healed completely when treated at a dose of 30 mg of neem bark twice a day for six weeks. Parameters for toxicity, including sugar, urea and hemoglobin levels, remained within normal range, suggesting no adverse effects on other organs.

Previous animal studiesⁱⁱ had shown that neem bark works by protecting the stomach's mucous lining and preventing oxidative damage by blocking lipid peroxidation and scavenging the free radicals that are a major cause of ulcers.

From the perspective of patients with chronic pain, particularly senior adults suffering from arthritis, the studies may indicate that neem bark used in combination with NSAIDs could be an effective alternative for people faced with the choice of an increased risk of heart attack from cox-2 inhibitors or the potential gastrointestinal injuries from NSAIDs alone.

In addition to its gastro-protective compounds, neem has traditionally been used as an anti-inflammatory treatment with some more recent researching confirming that use.ⁱⁱⁱ Compounds found in neem compare favorably with cortisone acetate and hydrocortisone according to a study published in the Journal of Indian Medical Research^{iv}, which notes that

neem may gain efficacy over a period of one to three weeks when treating inflammatory conditions such as arthritis.

And finally, neem bark has traditionally been used as an analgesic with at least one animal study^v indicating that it may affect both central and peripheral mechanisms and complex neural pathways. Anecdotal reports from users, particularly people suffering with chronic pain, suggest that it can be as effective as aspirin in treating joint pain and carpal tunnel syndrome.

John Conrick is president and founder of the Neem Association, and author of the book *Neem: The Ultimate Herb*. For more information, visit www.neemamerica.org

ⁱ Life Sciences, 2004 Oct. 29; 75 (24):2867-78, Clinical studies on the effect of Neem (Azadirachta indica) bark extract on gastric secretion and gastroduodenal ulcer
http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15454339

ⁱⁱ Inflammopharmacology. 2004; 12(2): 153-76 Mechanism of antiulcer effect of Neem (Azadirachta indica) leaf extract: effect on H⁺-K⁺-ATPase, oxidative damage and apoptosis
http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15265317

ⁱⁱⁱ Plant Medicine, 1981, 41:34-9, Anti-inflammatory and anti-pyretic actions of Azadirachta indica

^{iv} Journal of Indian Medical Research, 1970, 58: 724-30. Anti-inflammatory activity of saponins and other natural products

^v Indian J Exp Biol. 1995 Nov; 33(11):848-50, Antinociceptive action of Azadirachta indica (neem) in mice: possible mechanisms involved,
http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=8786160