



COLCHICINE

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Colchicine is a uricosuric agent used in the treatment of several systemic and dermatologic conditions. Its medicinal value has been reported since the first century where it was extracted from the autumn crocus plant. The drug is rapidly absorbed, metabolized in the liver and excreted mainly in the feces. Initial effect can take anywhere between 12 to 24 hours with its peak anti-inflammatory effect occurring within 24 to 48 hours.

Mechanism: Since colchicine is used for both systemic and dermatologic disease, it has been shown to possess multiple different mechanisms. The medication is mostly used for its anti-inflammatory processes. Colchicine binds proteins in microtubules of neutrophils and prevents migration into areas of inflammation. It also prevents the release of inflammatory glycoprotein from phagocytes. Additionally, the medication inhibits leukocyte migration by interfering with inflammasome complex assembly in neutrophils and monocytes, preventing the activation of interleukin-1. The drug decreases phagocytosis in joints as well. Colchicine decreases lactic acid production by neutrophils resulting in reduced uric acid crystal deposition and decreased inflammation.

Uses: With several different mechanisms of action, colchicine has established a broad area of coverage in both systemic and dermatologic diseases. It is commonly used to treat gout, which is a debilitating condition that causes recurrent episodes of joint pain. Other common diseases it treats include familial Mediterranean fever which leads to recurrent fevers, and Behcet's syndrome which is characterized by recurrent oral and genital ulcers. Non-dermatologic diseases colchicine treats are recurrent pericarditis, Paget's disease of bone, biliary and hepatic cirrhosis, chronic idiopathic thrombocytopenic purpura, idiopathic pulmonary fibrosis and pseudogout.

Secondary to its mechanism of action, colchicine finds utility in several dermatologic diseases such as:

- Dermatitis Herpetiformis
- Amyloidosis
- Behcet's syndrome
- Erythema nodosum

Side Effects: The most common adverse reactions are nausea, vomiting, diarrhea, anorexia, lactose intolerance and abdominal pain. Other side effects that occur less commonly are rash, hepatotoxicity, fatigue and headache. Colchicine should be avoided in patients taking protease inhibitors. Caution should be exercised when treating patients with cardiac or gastrointestinal disease, blood dyscrasias, liver or kidney dysfunction, biliary obstruction and the elderly. Severe complications can be rhabdomyolysis, multi-organ failure, disseminated intravascular coagulation, hypersensitivity reaction and neuropathy. Chronic administration of colchicine is associated with bone marrow suppression, myelosuppression, leukopenia, thrombocytopenia or aplastic anemia. Toxic effects are secondary to its antimetabolic activity in proliferating cells in the skin, hair and bone marrow. Toxicity is increased in patients taking P-glycoprotein inhibitors of CYP3A4. Patients taking the medication long-term should have their CBC monitored and a baseline creatinine. Colchicine can decrease body temperature, suppress the respiratory center, and cause hypertension. As a result, acute overdoses can be fatal. The medication should be avoided in lactation as it is considered possibly unsafe. Treatment for various conditions with colchicine during pregnancy is generally considered safe for both the mother and fetus; however, it should only be given during pregnancy when the benefit outweighs the risk.

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