NEXTSTEPS IN DERM | GW School of Medicine & Health Sciences

Colchicine Therapeutic Cheat Sheet

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TRADE NAME[1-3]

- Colcrys (colchicine 0.6 mg tablets)
- Mitigare (colchicine 0.6 mg capsules)
- Lodoco (colchicine 0.5 mg tablets)

MECHANISM OF ACTION[4]

- Inhibits microtubule polymerization during metaphase of mitosis, targeting rapidly proliferating cells.
- Inhibits neutrophil proliferation, chemotaxis, adhesion, mobilization, signal transduction, gene expression, and degranulation.
- Inhibits neutrophil deformability, affecting extravasation during inflammation.
- Modulates pyrin expression, regulating effects of pyrin overactivation in Familial Mediterranean Fever.
- Inhibits caspase 1, thus inhibiting pro-interleukin (IL) 1α activation and decreasing production of pro-inflammatory cytokines (IL-6, TNF-α).
- Blunts activation of macrophages through decreased TNF-α and reducing TNF-α receptors on the surface of macrophages.
- Reduces TNF-α receptors on the surface of endothelial cells.
- Directly suppresses fibronectin, inhibiting the assembly and deposition of amyloid fibers.
- Inhibits expression of the IL-2 receptor on activated T lymphocytes and downregulates surface expression of intercellular adhesion molecule-1 (ICAM-1) and E-selectin, eliciting immunosuppression.

FDA-APPROVED FOR[1-6]

- Prophylaxis and treatment of gout flares in adults
- Treatment of Familial Mediterranean Fever in adults and children 4 years or older
- Reduction of the risk of myocardial infarction, stroke, coronary revascularization, and cardiovascular death in adult patients with established atherosclerotic disease or with multiple risk factors for cardiovascular disease

OFF-LABEL DERMATOLOGIC USES[4,8-11]

- Chronic urticaria
- Sweet's syndrome
- Pyoderma gangrenosum
- Behcet's disease
- Pustular psoriasis
- Psoriatic arthritis
- Palmoplantar pustulosis
- Erythema nodosum
- Erythema nodosum leprosum
- Recurrent aphthous stomatitis
- Leukocytoclastic vasculitis
- Urticarial vasculitis
- Erythema elevatum diutinum
- Relapsing polychondritis
- Calcinosis cutis
- Granuloma faciale
- Dermatitis herpetiformis
- Epidermolysis bullosa acquisita
- Bullous morphea
- Mucous membrane pemphigoid
- Subcorneal pustular dermatosis
- Linear IgA disease
- Subcorneal pustular dermatosis
- Dermatomyositis
- Scleroderma
- Actinic keratosis
- Eosinophilic cellulitis
- Fibromatosis
- Keloids
- Lichen planus pigmentosus
- Mid dermal elastolysis
- Oleoma
- Systemic amyloidosis
- Primary anetoderma
- Hidradenitis suppurativa
- Acne vulgaris
- Condyloma acuminatum

DOSING[1-4,8]

- For off-label use in dermatologic conditions, dosing ranges vary from 0.5–2 mg dosed one, two, or three times daily.

WARNINGS AND PRECAUTIONS[4,11]

- Common side effects of colchicine include diarrhea, nausea, and vomiting.
- Uncommon side effects include abdominal cramps, abdominal pain, lactose intolerance, elevated liver transaminases, maculopapular rash, purpura, alopecia, leukopenia, granulocytopenia, thrombocytopenia, pancytopenia, aplastic anemia, myopathy, elevated CPK, myotonia, muscle weakness, muscle pain, rhabdomyolysis, oligospermia, azoospermia, oliguria, and renal damage.

DRUG INTERACTIONS[8]

- Colchicine is metabolized by the CYP3A4 enzyme in the liver; increased risk of toxicity occurs in patients taking other drugs that utilize this pathway.
- Colchicine relies on P-glycoprotein for absorption and bioavailability; increased risk of toxicity occurs in patients taking other drugs that utilize this pathway.
- Dose adjustment is necessary in patients with renal impairment.
- Common drugs that may increase plasma concentrations of colchicine include: clarithromycin, erythromycin, fluconazole, itraconazole, ketoconazole, diltiazem, verapamil, cyclosporine, tacrolimus, atorvastatin, and simvastatin.

CONTRAINDICATIONS[4,8]

- Absolute contraindications include known hypersensitive to colchicine, concomitant use of a P-glycoprotein or CYP3A4 inhibitor in a patient with renal or hepatic impairment, severe gastrointestinal impairment, severe cardiac impairment, renal dysfunction (creatinine clearance <10 mL/min), and hepatic dysfunction (known liver dysfunction or elevation of transaminases while on colchicine).
- Relative contraindications include pregnancy/lactation, blood dyscrasias, geriatric patients, and children.

PREGNANCY AND BREASTFEEDING[4]

- Pregnancy: Colchicine is a category C drug. Its use during pregnancy should be avoided unless the potential benefits outweigh the risks to the fetus.
- Breastfeeding: 10% of colchicine is excreted in breast milk. Breastfeeding is not recommended while taking this medication.

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