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The impact of anticancer drugs on the ocular surface

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Abstract

Cancer is a global health problem and is one of the leading causes of death worldwide. Pleasingly, the rate of survival has improved and continues in an upward trend mainly due to better diagnosis and treatment modalities. In particular, the development of anticancer drugs including cytotoxic chemotherapy, hormonal agents and targeted therapies have provided the most effective treatment options in combatting cancerous cells. However, the antineoplastic mechanisms of these drugs can also lead to undesirable systemic and ocular side effects resulting from cytotoxicity, inflammation and neurotoxicity. While survival rates are projected to increase with time, the number of patients presenting with these side effects that can substantially impact quality of life will also rise. The current paper reviews the ocular surface and adnexal side effects of anticancer drugs, the appropriate management and possible interactions between drugs for ocular surface pathology treatment and the anticancer drugs. © 2020 Elsevier Inc.

Author Keywords

Anticancer drugs; Chemotherapy; Drug interactions; Hormonal agents; Ocular adnexa; Ocular side effects; Ocular surface; Targeted therapies

Index Keywords

agents acting on the eye, antineoplastic agent, antineoplastic hormone agonists and antagonists, antineoplastic monoclonal antibody, cytotoxic agent, phosphotransferase inhibitor, antineoplastic agent; anterior eye segment, biochemistry, biophysics, cancer chemotherapy, cancer hormone therapy, conjunctiva, conjunctiva disease, cornea, cornea disease, cornea erosion, cornea verticillata, corneal deposit, disease association, drug safety, eye toxicity, eyelash, eyelid, eyelid disease, human, lacrimal apparatus, lacrimal gland disease, molecularly targeted therapy, nonhuman, ocular surface disease, pharmacodynamics, pharmacokinetic parameters, punctate keratitis, Review, side effect, superficial punctate keratitis, symptom, tear film, eye, quality of life; Antineoplastic Agents, Eye, Humans, Quality of Life

Chemicals/CAS

Antineoplastic Agents

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