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A joint initiative of the Patient Services Section and the Drug and Therapeutics Information Service of the Pharmacy Department, Repatriation General Hospital, Daw Park, South Australia. The RGH Pharmacy E-Bulletin is distributed in electronic format on a weekly basis, and aims to present concise, factual information on issues of current interest in therapeutics, drug safety and cost-effective use of medications.
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Drug-induced photosensitivity reactions

Drug induced photosensitivity reactions are a relatively common side effect associated with many medications. These reactions occur via activation of a chemical by ultra-violet or visible light. Many commonly used drugs are implicated (both systemic and topical use), and include amiodarone, NSAIDs, phenothiazines, retinoids, quinolones, sulfonamides, tetracyclines, and thiazides.

Most photosensitive reactions manifest as an exaggerated sunburn on areas of exposed skin; however, some phototoxic reactions may cause a vesicular rash that resembles porphyria cutanea tardea (pseudoporphyria), or other skin conditions, such as lichen planus. Some medications are associated with photosensitive reactions that result in discolouration of the skin; for example, the characteristic blue-grey discolouration that can result from exposure to sunlight during amiodarone treatment. A photosensitive rash to psoralens may resolve with a brown discolouration, and this reaction can be used therapeutically for disorders such as vitiligo.

There are two main types of photosensitive reactions: phototoxic and photoallergic. Phototoxic reactions are the most common form, which occur within minutes to hours after light exposure, and result from direct damage to the skin by a photo-activated medication. The rash is confined to the area of sun exposure, and is dependent on the concentration of drug and the amount of light exposure. Photoallergic reactions occur when repeated exposure to a photoactivated medication results in a cell-mediated immune response. The rash usually occurs within 1–3 days after exposure. Photoallergic reactions occasionally result in a rash that spreads beyond the boundary of light-exposed skin.

A medication history and history of light exposure should be elicited for patients presenting with a rash. Phototesting with ultraviolet or visible light may be required for diagnosis, and also to determine whether the patient can tolerate lower doses of the medication. Most photosensitive reactions are not severe; however, this is dependent on the concentration of medication and the amount of light exposure. Usually, the reaction resolves after the medication is ceased, but this depends on the severity of the reaction and the kinetics of the medication. Some patients develop a persistent light reaction (or chronic actinic keratitis) where the condition persists after drug cessation and can be aggravated by minimal exposure to UV light.

Before treatment with medications commonly associated with photosensitivity, patients should be counselled about the potential for severe skin reactions after exposure to sunlight, and the importance of wearing protective clothing and sunscreen. These measures may be adequate for patients who are required to take medications for a prolonged duration, even after a reaction has occurred. If possible, however, the patient should avoid medication that has caused a skin reaction. If a photoallergic reaction has occurred then the offending medications must be ceased, as reactions of increasing severity may occur upon repeated exposure.

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