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What's New in Photodermatology

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WHATS NEW IN .....

Photodermatology is the study of the interaction of ultraviolet and visible light with skin and the Photobiology Unit in Dundee is the only centre in Scotland that is available for the investigation of patients with suspected photosensitivity.[1] Some chemicals (eg- topical NSAIDs), at concentrations that are normally harmless, can react with sunlight to cause painful phototoxic reactions in susceptible people if they get into their skin or eyes.[2] Currently it can be difficult to predict what patient will have a reaction and which patient will not.[2] Areas of ongoing research and development are in the investigation of drug and light interactions, such as individual sensitivity to drug phototoxicity, with both clinical and in vitro studies.[2-4] This is important as these drug reactions can be very severe and is associated with significant patient morbidity.

Another major area of research interest is in the porphyrias that are a further example of drug light interaction with Dundee being a leading study centre.[5] The porphyrias are a group of (mostly) hereditary conditions that cause a disruption in the body's production of the heme molecule. The result is a build up of precursors that can be nephrotoxic or indeed cause photosensitivity of the skin. These interactions can also be used therapeutically such as in photodynamic therapy, with ongoing studies in improving treatment regimes and optimising patient tolerability of PDT, with the introduction of low output portable LEDs for use in ambulatory PDT. Another area of research interest in photodermatology is the use of artificial sources of ultraviolet light to diagnose and treat skin disease. The National Managed Clinical Network for phototherapy facilitates studies into individual factors that may be predictive of phototherapy treatment responses and clinical trials of optimisation of phototherapy treatment regimes.[1] We have also recently set up a photobiology tissue bank in which we store DNA on patients seen in the Photobiology Unit and this will facilitate investigations into genotype-phenotype correlations in some of the disease processes such as polymorphic light eruption, a common photosensitive disorder.[1]

References

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