NHS SCOTLAND

Photonet
National Managed Clinical Network for Phototherapy in Scotland

Immunosuppressants & Radiotherapy Guidance*

NOTE
This guideline is not intended to be construed or to serve as a standard of care. Standards of care are determined based on all clinical data available for an individual case and are subject to change as scientific knowledge and technology advance and patterns of care evolve. Adherence to guideline recommendations will not ensure a successful outcome in every case, nor should they be construed as including all proper methods of care or excluding other acceptable methods of care aimed at the same results. The ultimate judgement must be made by the appropriate healthcare professional(s) responsible for clinical decisions regarding a particular clinical procedure or treatment plan. This judgement should only be arrived at following discussion of the options with the patient, covering the diagnostic and treatment choices available. It is advised, however, that significant departures from the national guideline or any local guidelines derived from it should be fully documented in the patient's case notes at the time the relevant decision is taken.

Iatrogenic Immunosuppression and Phototherapy

There is evidence that the concomitant combinations of ciclosporin and PUVA and, probably, methotrexate and PUVA increase skin cancer risks. There are uncertainties regarding whether or not there are risks, and if they exist how great they are, with other immunosuppressives and other phototherapies. Such possible risks generally need to be assessed on an individual patient basis and discussed with each patient.

As with all medical interventions, hoped-for benefits must also be considered along with definite and possible risks.

There are some common situations when risks and benefits in combining of phototherapy and immunosuppression must be considered.

Regarding Wholebody Narrowband Ultraviolet B Phototherapy

As there is no evidence that narrowband UVB increases skin cancer risks on its own there is generally less concern about combining it with drugs known to, on their own, increase cancer risks such as ciclosporin and some of the biological drugs. Nevertheless, there are still reasons to think that this form of phototherapy could increase the risks of some skin cancers and so caution in combining it with drugs known to, or which might, increase skin cancer risks is appropriate.

1. A patient may be severely affected by cutaneous psoriasis (or another UVB responsive dermatosis) and also have joint disease. If the joint disease is well controlled on methotrexate, then it is often appropriate to add narrowband UVB phototherapy for the skin disease. The risks might be greater with a biological drug, particularly one of the TNF alpha blockers, but if it is working well for joint disease and not for skin disease, then it is often appropriate to add in narrowband UVB phototherapy.

2. There are situations where immunosuppressive therapy and phototherapy have each been inadequate when used alone for skin disease. In such situations, it is rarely appropriate to use phototherapy in combination with the immunosuppressive: for example, a patient who has not responded adequately to either UVB or omalizumab as a treatment for chronic urticaria when used as monotherapies. Another uncommonly encountered example would be where a patient has partial but inadequate response to methotrexate for psoriasis or atopic eczema when used alone.

3. A patient with atopic eczema may have not responded adequately to UVB and other available phototherapies, nor to topical steroids but has had a partial benefit with topical tacrolimus ointment. In such situations, it may be appropriate, again rarely, to combine topical tacrolimus and narrowband UVB phototherapy after discussion with the patient, including explanation of the

reasons why the BNF states “avoid excessive exposure to sunlight and sunlamps” when topical tacrolimus is used.

4. There are reports of studies describing the deliberate combination of methotrexate and UVB phototherapy for psoriasis and topical tacrolimus ointment and UVB phototherapy for vitiligo. Although these studies showed benefit, the magnitude of the benefit on average does not suggest that these should be routine combinations; again, rarely, the combinations may be considered, after discussion with the patient, on an individual basis.

5. Azathioprine is widely used, such as for inflammatory bowel disease, and because it is photocarcinogenic there must be concerns about combining it with UVB phototherapy. Whether or not the combination should be used for a particular patient is an individual decision which should be made with the patient.

PUVA

There are more concerns about combining PUVA with immunosuppression; There is evidence that the combinations of ciclosporin and PUVA and, probably, methotrexate and PUVA increase skin cancer risks.

This is mainly because there is a known increased non-melanoma skin cancer (at least for squamous cell and basal cell carcinoma) risk with PUVA. Rarely, when methotrexate is working extremely well for other disease, most commonly joint disease, then if UVB has been inadequate it may be appropriate to give PUVA for severe skin disease, particularly psoriasis. Balancing the risks and benefits is clearly important in this situation and considering whether another systemic immunosuppressive which might work for both joints and skin, would be more appropriate. PUVA and ciclosporin should not be combined.

UVA1 Phototherapy

This is less widely available. This can be a particularly helpful treatment in the sclerosing conditions (such as widespread morphoea). Patients referred for UVA1 to treat such conditions will often have tried other treatments previously and if there is an inadequate but partial benefit with systemic immunosuppression (most commonly pulse steroids, mycophenolate and/or methotrexate), then it is often appropriate to add in concomitant UVA1 phototherapy. Of course, the theoretical risks should be discussed with the patient.

External Beam Radiotherapy and Phototherapy

Another, sometimes related, question regards the use of phototherapy in someone who has previously been treated with radiotherapy. In general, over the past decades, targeting of external beam radiotherapy has been such that doses received by the skin are minimal. This means that usually previous radiotherapy is not a contraindication to phototherapy. When the skin has received a large dose of

radiotherapy (such as previous radiotherapy for skin disease or to the spine or if the patient recalls an acute radiodermatitis) this should be discussed with the patient and it may be appropriate to shield the areas of skin previously treated with radiotherapy