Improve Prevention of Chemotherapy Based Alopecia

SCALP COOLING TREATMENT

Be Our Guest
One of the most distressing consequences of chemotherapy is hair loss. During their initial consultation, one of the most frequent questions asked is “Am I going to lose my hair?” ( Particularly Breast Cancer Patients).

Montserrat Cancer Care is the first in Queensland to officially offer patients a clinically proven, TGA approved, scalp cooling treatment (Paxman) that prevents and aids at reducing alopecia caused by certain chemotherapy drug regimens.

The Scalp cooling treatment can be used with all solid tumor cancers in breast, prostate, lung, colorectal and gynaecological that are treated with most commonly used chemotherapy drugs regimens:

- Taxanes (e.g. docetaxel)
- Alkylating agents (e.g. Cyclophosphamide)
- Anthracyclines/DNA intercalating agents (e.g. Doxorubicin).

The treatment cannot be used with haematological malignancies, cold allergy, cold agglutinins, manifest scalp metastases and imminent bone marrow ablation chemotherapy.

Chemotherapy induced alopecia not only identifies to the community that a patient has cancer, it also has a significant impact on the patient’s quality of life causing:

- Negative changes in body image.
- Decreased social relationships.
- A constant reminder of their disease.
- Altered interpersonal relationships.
- It may even influence patient’s decisions about lifesaving treatment.
Scalp treatment can give patients a little more control and is a strong psychological intervention to improve cancer care. The system has been treating tens of thousands of patients annually throughout the world with a success rate from 56% to 73%.

Studies in the United Kingdom show an 89% efficacy rate with the use of the Paxman System in breast cancer patients.

A Comprehensive clinical evidence reports can be found at: http://paxmanscalpcooling.com/the-system/clinical-efficacy

Results - U.K. Study of Efficacy 1

**Results - Alopecia prevention.**
Authors concluded that scalp cooling is an effective method for avoiding alopecia in patients receiving FEC or weekly paclitaxel. Only 8% of patients experienced significant hair loss.

**Results - Patients**
89% of patients described scalp cooling as acceptable, with minimal discomfort caused by the longer treatment period.
- Only 15% of patients considered coldness to be a major problem.
- Only 2% of patients considered headaches to be a major problem.
- One patient discontinued treatment because of discomfort.

How does it work?
Chemotherapy works by targeting all rapidly dividing cells in the body. Hair is the second fastest dividing cell and this is the reason why so many chemotherapy drugs cause alopecia. The hair follicles in the growth phase are attacked, resulting in hair loss approximately 2 weeks after the commencement of the chemotherapy treatment. The damage that chemotherapy causes to the hair follicle may be alleviated by using scalp cooling.

There are 2 scientific rationales for scalp cooling:
1. Cooling causes vasoconstriction which reduces the blood perfusion rate and consequently reduces the amount of cytostatic drugs reaching the hair follicles.
2. Cooling reduces the metabolic rates of biochemical processes which result in less damage being made to the hair follicle.

The Paxman system uses a refrigeration unit that pumps coolants through the cap, extracting heat from the patient’s scalp cooling to less than 22°C (Temperature of the scalp cap is 5°C). It reduces blood flow to the scalp by 20-40% of the normal rate.

Inline temperature sensors ensure the cap maintains the scalp at an even constant temperature. Cooling commences prior to chemotherapy and is continued during the infusion and for a variable time post transfusion (typically 1-2 hours) to cover the peak serum levels.
First in Queensland

North Lakes Haematology & Oncology Clinic
Tel: (07) 3833 6755
www.nlhoc.com.au
7 Endeavour Bvd, North Lakes Q 4509 (next to OzCare)

Sunshine Coast Haematology and Oncology Clinic
Ph: (07) 5479 0000
www.schoc.com.au
10 King Street, Buderim, 4556

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