



Scalp Cooling Policy for Adult Cancer Patients receiving Alopecia Inducing Chemotherapy/SACT

“Quality and safety for every patient every time”

Document Control

Prepared By	Issue Date	Approved By	Review Date	Version	Contributors/ Reviewers	Comments/ Amendment
Chemo Nurse Group	11.7.11	Chemo Group	July 2013	1.1	Wendy Anderson/Sharon Harper	
Chemo Nurse Group	2.7.13	Chemo Group	July 2015	1.2	Jane Beveridge	
Chemo Nurse Group	15.10.15	Chemo Group Chair	15.10.17	1.3	Wendy Anderson/ Melanie Robertson	Policy reviewed and reissued. Updated Network name, no content change
Helen Roe	20.06.21	Chemo Group Chair	20.06.21	1.4	Helen Roe	Policy review and update, removed device specific references

For more information regarding this document, please contact:

Northern Cancer Alliance
NHS England, Waterfront 4, Goldcrest Way,
Newcastle Upon Tyne, NE15 7NY
england.nescn@nhs.net

Scalp Cooling Policy for Adult Cancer Patients receiving Alopecia Inducing Chemotherapy/SACT

Introduction

Hair loss can be a very distressing side effect for patients undergoing chemotherapy /systemic anti-cancer treatments (SACT) and sometimes lead to patients refusing treatment. It can be a major psychological issue for some patients.

Scalp cooling is a method of minimising chemotherapy/SACT-induced alopecia and has been shown to effectively reduce the incidence of hair loss. It acts by reducing the hair follicles temperature of the scalp, causing the blood vessels supplying the hair follicles to constrict which decreases the amount of drug that can pass to the hair follicles. This reduces the cellular uptake of the drug and the degree of hair loss.

The drugs cause atrophy and loss of the hair root bulb resulting in total alopecia or partial atrophy of the hair shaft, making it more susceptible to the trauma of normal hair care.

Scalp cooling can be used to prevent total hair loss in certain drug protocols. Minimal evidence exists to prove the efficacy of scalp cooling methods and which method is most effective. There is also little, and conflicting, evidence about the risk of scalp metastasis and so the use of scalp cooling is controversial.

Some professionals are concerned that cancer cells, which may have spread to the scalp, may be more likely to survive the chemotherapy/SACT if scalp cooling is used. However secondary cancers in the scalp remains very uncommon. Trials have shown that the risk of developing these as a result of scalp cooling is very small, except in some more aggressive haematological cancers. There has been a slight increase in incidence; however this may be due to patients living longer with cancer and Trusts having better reporting systems in place

For this reason the cap should only be used following discussions around appropriateness of use with the patients and patient's consultant, including additional length of time of clinic appointment. Over recent years there have been legal cases where patient have been offered scalp cooling without receiving the correct information prior to making the decision and patients must be fully informed, including risks, potential benefits in regard to the specific cancer they have and treatment they will receive, prior to agreeing and consenting to use the scalp cooling system.

Despite scalp cooling some patients still lose their hair or hair may just thin slightly. Scalp cooling only protects hair on the scalp. Other areas of body hair may still be lost.

Indications

Scalp cooling may be offered to patients who have solid tumours who are receiving single agents or in combinations with other cytotoxic drugs which do not cause alopecia. It is most commonly used for patients with breast cancer.

Scalp cooling is most likely to be effective with;

Cyclophosphamide
Daunorubicin
Docetaxel

Doxorubicin (Adriamycin)
Epirubicin
Paclitaxel

Exclusions / Contra Indications

Scalp cooling is not suitable;

- When there is too high a risk that cancer cells could survive in the blood vessels of the scalp and cause the cancer to come back after treatment, for example, with some haematological malignancies such as certain myeloma, leukaemia and lymphoma.
- For some patients requiring very high doses of chemotherapy, as scalp cooling is less likely to work with very high doses of the drug.
- For some chemotherapy treatments where the drug stays in the body for a long time for example patients receiving continuous treatment via a pump or drugs with a long half life. This makes it impractical to have scalp cooling.
- In patients whose liver function is compromised. This may lead to the drugs circulating in the body for longer than usual, and it may not be possible to keep the scalp cold for long enough.
- In patients who suffer from severe migraines.
- Patients receiving other drugs which cause hair loss, where there is limited or no evidence of the effectiveness of scalp cooling, for example Etoposide.
- Patients who have received their first cycle of chemotherapy which may induce hair loss but where scalp cooling was declined or not offered. Hair loss at this time is inevitable and scalp cooling would be futile.
- Patients receiving oral Cyclophosphamide as there is uncertainty about the length of time it takes for the drug to metabolise via the oral route.

Scalp cooling can be a long and uncomfortable procedure. Due to time limitations it is not appropriate with regimens that have lengthy administration times (greater than 3 hours). The length of time required to successfully prevent hair loss would cause discomfort to the patient and also increase the length of time the patient would need to stay on the chemotherapy unit.

If patients insist on using the scalp cooling in longer regimens then they should be made aware that the chances of success are not known. This must be recorded in the patients' records.

Patient should be informed that they will feel 'chilly' when using the caps and advised to wear warmer clothing when attending for treatment. They should be offered hot drinks. They may experience headaches especially in hot weather.

Patients should be informed of the wig fitting service available where appropriate, supported by relevant written literature regarding hair loss and hair/scalp care.

Procedure.

A minimum of verbal consent must be obtained from the patient and their decision recorded in the medical/nursing notes.

Patients' suitability to continue using the caps should be re-discussed at each visit as continuity is likely to achieve greater success. However some patients may still wish to continue using the caps even if they are experiencing patchy hair loss. They should be informed of the risk of ice burns and that the thickness of the padding used to protect from ice burns may reduce the effectiveness of scalp cooling.

There are two systems for scalp cooling in use:

Bibliography

1. Adams, L. et al. (1992) The prevention of hair loss from chemotherapy by the use of cold air scalp cooling. *The European Journal of Cancer Care* 15 pg 16-18
2. Dean, J.C. et al. (1979) Prevention of Doxorubicin-induced hair loss with scalp hypothermia. *The New England Journal of Medicine*, 301, pg 1427-9.
3. Hunt, J. et al. (1982) Scalp hypothermia to prevent Adriamycin induced hair loss. *Cancer Nursing*, 5 (1), pg 25-31.
4. Lemanager, M. et al. (1997) Effectiveness of cold cap in the prevention of Docetaxel induced alopecia, *The European Journal of Cancer*, 33 (2), pg 297-300.
5. <http://www.paxman-coolers.co.uk/clinical-data/best-practice-protocols.asp>
6. Robinson, M.H. (1987) Effectiveness of scalp cooling in reducing alopecia caused by Epirubicin treatment of advanced breast cancer. *Cancer Treatment Reports*, 71, pg 913-4.
7. *The Royal Marsden Hospital Manual of Clinical Nursing Procedures*, (2000) Blackwell Publishing.
8. Tierney, A.J. (1991) Chemotherapy induced hair loss. *Nursing Standard*, 5 (38) 29-31.