

Scalp cooling: Perceptions and experiences of Australian and Dutch Health professionals.

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BACKGROUND

- Hair loss from chemotherapy is a common and distressing side effect for breast cancer patients. Scalp cooling is the only proven method to reduce hair loss in this setting.
- Scalp cooling to reduce this hair loss has been available in Europe for more than a decade, with almost all hospitals in the Netherlands now offering cooling. An extensive national data base in the Netherlands has collected outcomes on over 14,000 patients (1). Despite demonstrated effectiveness, uptake has been variable, with not all eligible patients offered cooling.
- It has only recently been introduced into Australia, commencing at the Mater Hospital with Penguin Cold Caps[®] in 2012, and moving on to coolant based systems (Dignitana[®] and Paxman[®]) more recently. Uptake has been slow and patchy with only approximately 15 sites active in Australia, mostly in the private sector.
- We undertook to learn about the barriers and facilitators of implementation by exploring health professionals' knowledge and attitudes in both countries, in order to devise better implementation strategies.

METHODS

- In Australia, Qualitative interviews were held with 21 Health professionals (Doctors and nurses) in 4 centres utilising scalp cooling and 1 without access.
 - Telephone interviews were conducted using a semi structured interview format
 - Issues Explored included:
 - Perceived impact of chemotherapy-induced hair loss for patients and importance of intervening
 - Attitudes, knowledge and experiences with scalp cooling
 - Perceived barriers and facilitators to scalp cooling locally and nationally
 - Constant comparative methodology
 - Recruitment continued until theoretical saturation
 - Interviews were digitally recorded, translated and transcribed verbatim, and themes analysed (2).
- In The Netherlands, a Quantitative survey was performed with 100 Medical Doctors (MD's) and 49 nurses, half of whom worked in hospitals offering scalp cooling. (3)
 - Questions were developed by the authors since there are no validated instruments existing
 - As well as predefined response categories, free text answers were encouraged
 - MD's were recruited via email to the Directors of the 8 comprehensive cancer centres
 - Nurses were recruited via specialised oncology nursing (LOOV) and breast care group of IKNL.
 - Topics covered included
 - Satisfaction with outcomes
 - Reasons for offering/ not offering
 - Knowledge gaps
 - Male vs female patients
 - Implementation problems at the unit level
 - Need for additional education or resources



Team approach is vital for successful implementation



DIGNITANA DIGNICAP

PAXMAN ORBIS



4 Cycles Doce/Cyclo

6 Cycles ADr/Cyclo



4 Cycles FEC, crown loss and illusion created

Photographs used with patient permission.

OUTCOMES

Despite different durations of experience with scalp cooling (Netherlands since 2005, Australia since 2012), themes emerging were similar:

1. Hair loss was considered an important side effect, with significant impact upon patients. It was considered worthy of intervention by the majority of respondents.
2. Overall, health professionals in centres offering scalp cooling were satisfied with the results, but did not offer it to all potentially eligible patients (eg less likely to be offered to males, metastatic patients and non-breast cancer patients.)
3. Health Professionals identified knowledge gaps around
 1. Randomised trial results
 2. Efficacy of newer coolant based devices
 3. Patient selection
 4. Hair care during treatment
 5. The risk of scalp skin metastases
4. Around 1/3 of Dutch MD's considered scalp cooling to be too burdensome for patients. Some had had experience with older "cold cap" methodology, and were influenced by this.
5. Close communication and similar attitudes between nurses and MD's facilitated implementation.
6. Changes in nursing management and patient flow in the chemotherapy unit were required, including longer chair time, which is a burden for the health system.

Dutch survey

Reasons for not applying scalp cooling* (2)	MDs (n = 47), n (%)	Nurses (n = 20), n (%)
Too little evidence on the effectiveness	29 (62)	4 (20)
Inconsistent results	28 (60)	6 (30)
Too little evidence on the risk of scalp skin metastases in the adjuvant setting	27 (57)	6 (30)
The schedule of the outpatient clinic does not allow scalp cooling application (logistical difficulties)	18 (38)	10 (50)
Patients referred to another hospital	15 (32)	9 (45)
Patients do not ask for it	13 (28)	2 (10)
It is too burdensome for patients	13 (28)	4 (20)
Difficult to explain to patients why only a selected group is eligible for scalp cooling	8 (17)	2 (10)
It is too burdensome for nurses to apply	6 (13)	2 (10)
One or more colleagues do not want it	6 (13)	0 (0)
Hair loss can be overcome sufficiently by using wigs or head covers	5 (11)	1 (5)
Only applying scalp cooling in palliative patients is a too narrow indication	4 (9)	1 (5)
The nurses do not want it	2 (4)	NA
Do not believe hair loss decreases quality of life	2 (4)	0 (0)
Afraid too many patients will ask for scalp cooling because of the increasing awareness	0 (0)	1 (5)
The MDs do not want it	NA	8 (40)
Other	7 (15)	4 (20)

*Multiple answers allowed, NA: Not applicable

FUTURE DIRECTIONS

To foster improved implementation of scalp cooling, an international collaborative group has been formed under the umbrella of the Multinational Association for Supportive Care in Cancer (MASCC). Guideline and competency standards are planned.

A forum will be held in 2016 in conjunction with the MASCC Annual Meeting in Adelaide Australia.

Randomised trials of coolant devices are underway (Paxman) or recently completed (Dignitana) in the USA, paving the way for FDA assent to use.

Work is in progress internationally to develop better Quality of Life tools to measure impact of scalp cooling, in order to better power clinical trials of reduced durations of post-cooling, which is a major barrier.

Patient information video's in English and Dutch have been produced and are available online.* Information for hair care professionals has also been produced, but this is an area where future research and involvement of basic scientists and dermatologists would be valuable.

References

1. Van den Hurk C, Peerbooms M et al. Scalp cooling for hair preservation and associated characteristics in 1411 chemotherapy patients – results from the Dutch Scalp Cooling registry. Acta Oncol 2012, 51:97-504.
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3. Peerbooms M, Breen MPW et al. Familiarity, opinions and knowledge about scalp cooling- A Dutch survey among breast cancer patients and oncological professionals. Asia-Pacific Journal of Oncology Nursing 2015, 2:35-41.