Manual Scalp Cooling in Early Stage Breast Cancer: Value of Caretaker Training and Patient-Reported Experience to Optimize Efficacy and Patient Selection

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Secondary Endpoints:

- A small pilot study (n=10) was conducted to evaluate the feasibility and efficacy of manual cold capping, indicating there are limited prospective data on outcomes in real-world clinical settings.

- Randomized controlled trials suggest that manual cold capping results in physical and psychological impact on quality of life (1, 2).

- The Penguin Cold Cap is a portable scalp cooling system, which employs manual cold capping and is designed to reduce hair loss due to chemotherapy.

What is a Penguin Cold Cap?

The Penguin Cold Cap is a portable scalp cooling system, which employs manual cold capping to reduce hair loss due to chemotherapy.

Methods

A small pilot study (n=10) was conducted to evaluate the feasibility and efficacy of manual cold capping.

Key eligibility criteria included:

- 10 years of age and informed consent
- No hair loss at baseline (Dean's score 0)
- No pre-existing scalp condition
- Planned chemotherapy (ACTHP; TC, TOPI, or T1/24)
- Availability of caretaker for cold capping

Standardized Training:

- For the cold capping training, one or more caretaker was designated to assist with cold capping and underwent standardized training by certified research staff.

Participants:

- Participants were provided standardized training prior to the first treatment, but were not provided any additional training or support throughout the remainder of the treatment.

Cold cap temperatures determined by hair type (fine/medium hair: 23°C; 30°C ± 5°C; 38°C ± 5°C; 43°C ± 5°C).

Conclusion

- This pilot study confirms the safety and efficacy of manual cold-capping for the prevention of CIA in early-stage breast cancer and highlights its potential in the setting of both anthracycline-containing and anthracycline-based chemotherapy regimens.

- It also highlights the considerable costs and effort associated with cold-capping.

- The study demonstrates the potential utility of structured training to maximize efficacy and patient satisfaction.

- It emphasizes the importance of supporting patients undergoing chemotherapy with scalp hypothermia.

- The study suggests that cold-capping may provide a meaningful benefit to patients by reducing hair loss and improving quality of life.

- Further research is necessary to validate the preliminary findings and to determine the utility of cold-capping.

References

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