MANAGING CHALLENGING ALOPECIAS: PREVENTING CHEMOTHERAPY INDUCED ALOPECIA

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CHEMOTHERAPY INDUCED ALOPECIA

- Numerous chemotherapy medications cause alopecia by targeting rapidly dividing cells
- Generally starts 1-3 weeks after the first cycle of chemotherapy
- Usually reversible but may be permanent or cause permanent changes in hair growth rate, texture, and color

Table 1: Common changes that cause chemotherapy induced alopecia

| Common Changes | Causes | Dates
|----------------|-------|------|
| Moderate alopecia | Cytotoxic agents | 3 weeks after
| Severe alopecia | Cytotoxic agents | 3 weeks after
| Permanent alopecia | Cytotoxic agents | 3 weeks after

DISCLOSURES

- Clinical Research and Grants to University: Lilly
- Consulting: None
- Speaker Boards: None

CHEMOTHERAPY INDUCED ALOPECIA

- Alopecia has been noted as the most distressing side effect of chemotherapy in up to 58% of women with cancer
- 8% of women may decline treatment due to fear of alopecia

What can be done?

“I felt like my face had been erased”
SCALP COOLING

- Scalp cooling was first introduced in the 1970s; recently cleared by FDA for use in the U.S.
- It is thought to reduce blood flow to the hair follicles via vasoconstriction in the scalp, ultimately reducing chemotherapy uptake; also reduces biochemical activity of the hair follicle.

SCALP COOLING: HOW IT WORKS

- A cooling cap is placed on patient’s head prior to treatment and remains in place until after treatment is complete.
- The cap contains either a circulating coolant, ice, or dry ice.
- During each infusion patients undergo:
  - Pre-cooling – 30 minutes
  - Infusion cooling – depends on treatment regimen
  - Post-infusion cooling – 90 minutes

SCALP COOLING: IS IT EFFECTIVE?

- Multicenter randomized clinical trial of women with stage I and II breast cancer receiving a taxane and/or anthracycline showed 50% less hair loss in patients who underwent scalp cooling.
- 0% hair preservation was seen in the control group.
- Effectiveness dependent on many variables.

TYPES OF CAPS

- Manual caps (ice must be added during treatment):
  - Arctic Caps
  - Chemo Cold Caps
  - Penguin Cold Caps
  - WishCaps
- There are 2 FDA cleared automatic cooling systems:
  - Paxman
  - Dignicap

VARIABLES

- Type and frequency of chemotherapy
  - Taxane vs. Anthracycline based chemotherapy
- Technique in applying cooling cap
  - Proper fit
- Other variables
  - Age, sex, hair type
  - Liver function

VARIABLES: ETHNIC VARIATIONS

- Ethnic variations
  - Limited data regarding hair preservation rates in Black, Hispanic, and Asian patients.
- Proper fit affects results making differences in hair characteristics among different ethnicities relevant.
SCALP COOLING: IS IT SAFE

• Commonly reported side effects
  • Headaches
  • Cold sensation

• Concerns regarding risk of scalp metastasis
  • Risk of scalp metastasis is low regardless of scalp cooling
  • Meta-analysis suggests no increased risk of scalp metastasis
  • SCALP trial ongoing to determine risk

CONTRAINDICATIONS

Pre-Chemotherapy Evaluation

• History of scalp metastasis
• History of cold sensitivity or cold induced medical condition
• Severe liver or renal disease
• Hematologic malignancies
• Imminent skull irradiation

CANCER DIAGNOSIS

CANCER DIAGNOSIS

KEY POINTS

• Chemotherapy induced alopecia is one of the most dreadful side effects of therapy
• Scalp cooling effectively reduces chemotherapy induced alopecia

Survival
THANK YOU!