

Chemotherapy induced madarosis

Prof Fran Boyle

Dr Kortnye Smith

Dr Yoland Antill

Prof Julie Winstanley



THE UNIVERSITY OF
SYDNEY



MATER HOSPITAL
A FACILITY OF
ST VINCENT'S
HEALTH AUSTRALIA



Cabrini



**BREAST
CANCER
TRIALS**



Is Chemo Barbie realistic?



“Chemo Barbie”
Qantas Cabin Crew
Cancer Support Group



She still has eyebrows and eyelashes.



What do we know about chemotherapy effects on facial hair?

- › Many cytotoxic agents cause loss of eyebrows, eyelashes and beards
 - Anthracyclines, taxanes, irinotecan and cyclophosphamide.
- › Timing may be different from scalp hair loss, due to differences in proportion of cells in resting phase
 - Slower loss and slower recovery noted anecdotally
 - Depigmentation and thinning may persist
- › Madarosis in non-malignant settings has been associated with loss of attractiveness and psychological distress
- › Eyelashes have an additional role in protection of the ocular surface via the blink reflex and filtering of dust
- › Small studies with bimatoprost (prostaglandin analogue used in glaucoma treatment) suggest potential for accelerated eyelash regrowth*
- › Currently no systematic approach to quantification of CI Madarosis and its impact



Potential solutions need measurement



Focus Groups

- › 25 Australian women who had completed taxane-based chemotherapy for early breast cancer with the past 1-89 months (mean 25 months)
- › English speaking
- › All reported partial or complete alopecia
- › Some (n=5) had utilised scalp cooling for prevention of CIA
- › Semi-structured interview methodology
- › Transcripts analysed for themes using constant comparative methodology and independently reviewed for consensus
- › Ethics approval from Cabrini Hospital Melbourne
- › 7 themes emerged

1. Meaning and importance of brows and lashes

- › Essential feature of appearance
- › Created definition and structure to the face
- › Important aspect of femininity
- › Important for facial expression and able to convey emotion in non-verbal communication

“Without them you look strange, you lose definition, and expression as well.”

“Losing your hair accentuates your face, losing your eyebrows leaves it blank”

2. Timing, regrowth and permanent changes

- › Madarosis occurred in the later half of their chemotherapy, lagging behind alopecia by weeks to months
- › Regrowth was variable, and in some was incomplete
- › Persistent colour change, thinning and length of lashes in some
- › Distress at timing and permanency

“It happens at the end, when you should be feeling better.”

“I was nearly finished, now I look really sick.”

3. Lack or preparedness and information

- › All patients had been informed of the risk of alopecia and were prepared for scalp hair loss
- › Many were not aware of loss of other body hair and delay in onset
- › Distress occurred when they felt their facial hair had been preserved, only to find it later was lost
- › Scalp cooled patients falsely assumed that it would also assist brows and lashes.

“I had a false sense of security because everything else went at the same time but this didn’t”

“Because I had the cold cap, I thought it had frozen everything”

4. Impact of madarosis on self

- › Change in appearance with brow and eyelash loss
- › Decreased ability to communicate non-verbally
- › Self-identification as a cancer patient
- › Unable to cover up, unlike scalp hair loss
- › Loss of confidence in social interactions

“I really don’t look like myself, and drawing on brows looks so fake.”

“I am starting to look like the literature on cancer patients, and it’s really quite confronting.”

5. Impact of madarosis on others.

- › Less impact on immediate family than alopecia, particularly for those with young children
- › Caused social discomfort sufficient to change behaviour, due to being recognisable as a cancer patient.

“In the supermarket I chose the self-serve checkout, because I didn’t want to interaction with anyone, because it was so obvious to the world.”

“People look at you with pity”

6. Physiological side effects

- › Loss of eyelashes associated with increased tearing, dryness and eye irritation
- › Difficulty being outside due to risk of dust entering the eyes, led to need to wear protective eyewear
- › Difficulty wearing contact lenses
- › Regrowth of lashes caused pruritis and tingling on the lid in some women

“I noticed agitation, dry and watery eyes...you look as if you are crying all the time.”

NOTE: Eye watering and dryness may be a side effect of taxanes and aromatase inhibitors also used in breast cancer.

7. Management of madarosis

- › Women felt under-prepared for management of madarosis
- › Lack of satisfaction with masking options
 - Artificial eyelashes poorly adherent
 - Eyebrow toupees not a good match for hair colour
 - Eyebrow pencils poor aesthetic outcome unless good education
- › Eyebrow tattooing following chemotherapy a potential solution for poor regrowth

“It takes a long time to get ready these days, I can no longer just rush out the door.”

With hair you can get away with covering up, but eyelashes and brows are different.”

- › Madarosis needs to be treated as a separate (although related) entity to CIA, and is not prevented by scalp cooling.
- › Patients should be warned about differential timing, and advised about potential management solutions including eye protection.
- › This data will be used to develop a specific QOL tool to underpin future research on
 - Severity and timing of madarosis and regrowth with different chemotherapy regimens
 - Impact of potential protective or recovery factors eg bimatoprost, tattooing



A new look for Chemo Barbie?

