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Does disparity in educational material contributing to melanoma mortality? (Poster)

Alton Appleton

Cooper Medical School of Rowan University

Keita Oumou

Cooper Medical School of Rowan University

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Appleton, Alton and Oumou, Keita, "Does disparity in educational material contributing to melanoma mortality? (Poster)" (2018). *Cooper Medical School of Rowan University Capstone Projects*. 15.
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Does Disparity in Educational Material Contribute to Melanoma Mortality?



Alton J. Appleton, B.S., Oumou Keita, B.S., Natali Franzblau, MD, MBA, | Cooper Medical School of Rowan University, Camden, NJ, 08103

Introduction

Cutaneous Melanoma is a Fatal Skin Cancer with an increasing incidence. Data found on this disease in the SEERs Database demonstrates:

In the Caucasian Population, 83.9% are diagnosed at the localized stage and the combination of regional spread and distant metastasis accounts for only 12.5% of the disease.

In Hispanic and African American Populations localized disease accounts for 72.5% and 56% respectively.

Also the combination of regional spread and distant metastasis represents 22.3% in the Hispanic population and 35.8% in African Americans.

The stage of the disease at the time of diagnosis significantly impacts survival rate with 98.4% survival if diagnosed at the local stage and only 18% survival if diagnosed with distant metastasis.

Hypothesis

The lack of diversity in images in medical textbooks related to cutaneous melanoma may contribute to this disparity.

Method

- This study evaluated pictorial representation of melanoma in commonly used medical educational material in dermatology and oncology.
- Three reviewers each evaluated 129 images of melanoma from 7 textbooks.
- The reviewers rated the skin tone of each image according to The Fitzpatrick Skin Tone Scale.
- Each reviewer was blinded to the other reviewers results.
- The 6 Skin Types were grouped into 3 Categories; Type 1 and 2 were Group A, type 3 and 4 were Group B and type 5 and 6 were Group C.

The Fitzpatrick Skin Type Scale

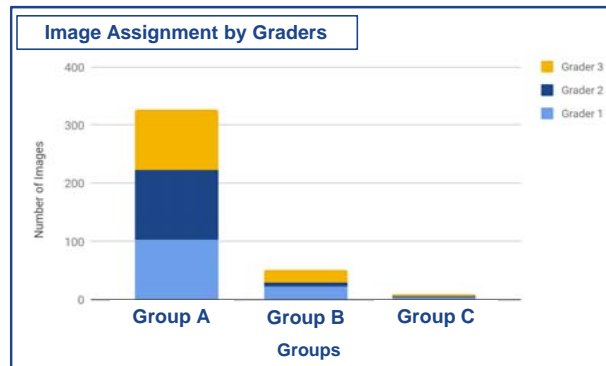
I IVORY	II BEIGE	III LIGHT BROWN	IV MEDIUM BROWN	V DARK BROWN	VI VERY DARK BROWN
<p>Characteristics Fair skin, light or red hair, prone to freckles. Burns very easily and rarely tans.</p> <p>Sun protection: At the greatest risk of developing skin cancer. Needs to protect skin, preferably with clothing.</p>	<p>Characteristics Fair skin, light to dark hair, blue or brown eyes. Some have dark hair but still have a fair skin.</p> <p>Sun protection: Should protect skin, preferably with clothing.</p>	<p>Characteristics Light olive skin with dark hair and brown or green eyes. Burns with long exposure to the sun but generally tans quite easily.</p> <p>Sun protection: Should protect themselves in strong sunshine.</p>	<p>Characteristics Brown eyes and dark hair. Burns with very little exposure to the sun but generally tans quite easily.</p> <p>Sun protection: Should protect themselves in strong sunshine.</p>	<p>Characteristics Naturally brown skin, brown eyes and dark hair. Burns only with excessive exposure to the sun. Skin rarely darkens further.</p> <p>Sun protection: Protect themselves when outdoors in the sun for a long time.</p>	<p>Characteristics Black skin with dark brown eyes and black hair. Burns only with extreme exposure to the sun. Skin very rarely darkens further.</p> <p>Sun protection: Protect themselves when outdoors in the sun for a long time.</p>



Results

A total of 387 Images Reviewed by Reviewers | 327 Images Classified as Group A, | 51 as Group B | 9 as Group C

Distribution of Images in Skin Tone



The Average Scores of Images For Each of The Reviewers

Reviewer	N	Mean Fitzpatrick Score
1	129	1.87
2	129	1.65
3	129	1.88
Total	387	1.8

Conclusion

The results of this pilot study demonstrate that there is a significant tendency toward lighter skinned images to portray skin pathology, specifically cutaneous melanoma.

Discussion

The lack of diversity in medical images of cutaneous melanoma raises the question of whether this contributes to the noted disparity in the stage at diagnosis in the African American and Hispanic population. If the medical community is not adequately trained to identify lesions in darker skinned individuals, it's likely harder to diagnose and often found at a later time and stage. Other factors may contribute to disparity in diagnosis including issues around access to care, awareness of illness, genetic variations or location and type of melanoma. However the data presented here in conjunction with disparity in advanced stages of cutaneous melanoma at the time of diagnosis requires further examination of the diversity in images of dermatologic conditions in medical education materials. The next step in this process more comprehensive research that includes more educational materials and more graders. Additionally, other pathology should be evaluated.

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