

UC Davis

Dermatology Online Journal

Title

Anxiety levels of patients undergoing common dermatologic procedures versus those seeking general dermatologic care

Permalink

<https://escholarship.org/uc/item/64d8r1gq>

Journal

Dermatology Online Journal, 23(5)

Authors

Kamangar, Faranak
Petukhova, Tatyana A
Monico, Gabriela
et al.

Publication Date

2017

DOI

10.5070/D3235034939

Copyright Information

Copyright 2017 by the author(s). This work is made available under the terms of a Creative Commons Attribution-NonCommercial-NoDerivatives License, available at <https://creativecommons.org/licenses/by-nc-nd/4.0/>

Anxiety levels of patients undergoing common dermatologic procedures versus those seeking general dermatologic care

Faranak Kamangar MD, Tatyana A. Petukhova MD, MS, Gabriela Monico BS, Stephen Mathis MBA, Jayne Joo MD, Anne Zhuang MD, Chin-Shang Li Ph.D., Yu Liu MS, Elle Lee, Daniel Eisen MD

Affiliations: Department of Dermatology, University of California, Davis, California

Corresponding Author: Faranak Kamangar, MD, Department of Dermatology, University of California, Davis, 3301 C Street, Suite 1400, Sacramento, CA 95816, Email: fkamangar@gmail.com

Abstract

Patients undergoing Mohs micrographic surgery frequently experience anxiety as a result of multiple potential factors. There is currently no data regarding how this anxiety compares to other common procedures performed in dermatology offices, such as shave biopsy and excision, relative to a general dermatology visit. Herein, we conducted a survey of 471 dermatology patients at an academic medical center, using a validated tool (Visual Analogue Scale from 1 “no anxiety at all” to 10 “extremely anxious”).

Keywords: patient anxiety, dermatology, dermatology surgery; Mohs micrographic surgery

Introduction

Patients undergoing surgery frequently experience anxiety as a result of multiple potential factors. [1]. It is known that patients undergoing Mohs micrographic surgery have anxiety [2]. There is currently no data regarding how this anxiety compares to other common surgical procedures performed in dermatology offices, such as shave biopsy and excision, relative to a general dermatology visit.

Herein, we conducted a survey of 471 dermatology patients at an academic medical center, using a validated tool (Visual Analogue Scale from 1 “no anxiety at all” to 10 “extremely anxious”) [3-5]. Consecutive patients in each of these categories were approached until each category contained at least 100 responses. The survey was administered from December 2014 to November 2015. Four

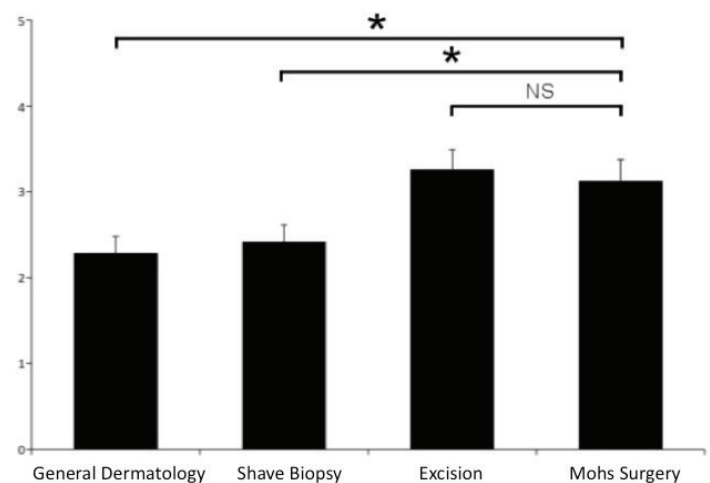


Figure 1. Anxiety VAS Mean, significantly different among the dermatology procedure groups (*), not statistically significant (NS).

hundred fifty three dermatology patients completed the instrument (**Table 1**).

We found that there were significantly different levels of anxiety among the four groups ($p < 0.0001$) (**Figure 1**). The highest levels of average anxiety were noted among excision and Mohs surgery patients. Patients undergoing a biopsy were slightly more anxious but not as anxious as those undergoing excision or Mohs surgery.

In particular, patients with no prior Mohs surgery had statistically significant greater levels of anxiety than individuals with a history of a prior Mohs surgery ($p = 0.018$). Of the patients reporting a history of Mohs surgery, higher levels of anxiety were associated with one prior Mohs surgery than with a history of two

prior surgeries ($p=0.019$).

Anxiety levels among the general dermatology visit groups were significantly different ($p=0.035$). In decreasing order, anxiety levels were highest for hair loss, warts, eczema, skin check, acne, and finally psoriasis. Statistical interpretation of these subgroups is limited by the small sample size in some of the groups. Among the distribution of age groups, dermatology patients in the age group of 50-59 years old followed by 30-39 years old were associated with a higher level of anxiety ($p=0.014$).

Other characteristics of patients such as education level, race, and history of skin cancer did not show any statistically significant correlation to anxiety level. Furthermore, comparisons of anxiety levels among patients with different health insurances, income levels, and living areas were not statistically significant either. Of note, unfortunately due to an error in survey collection, data on gender was not captured for analysis.

Conclusion

This survey study explored anxiety levels of dermatology patients undergoing common surgical procedures as compared to patients who present to our clinic for medical dermatology visits. We found that patients undergoing excision and Mohs surgery had similar levels of anxiety. Lower levels of anxiety were associated with shave biopsies, but all surveyed procedures had higher levels of anxiety than a typical clinic visit. The highest levels of anxiety were in the 50-59 years old group. In addition, we found that the level of anxiety improves with each subsequent Mohs surgery procedure. Our findings help identify procedures and patient subgroups who may have higher anxiety and might benefit from education and other anxiolytic measures.

References

1. Fleischman M, Garcia C: Informed consent in dermatologic surgery. *Dermatol Surg* 29:952-955, 2003. [PMID: 12930338]
2. Vachiramon V, Sobanko J, Rattanaumpawan P, Miller C. Music Reduces Patient Anxiety During Mohs Surgery: An Open-Label Randomized Controlled Trial. *Dermatol Surg* 2013;39:298-305. [PMID: 23346989]
3. Spielberger C. State-Trait Anxiety Inventory for adults, self-evaluation questionnaire STAI form Y-1 and Y-2. Mind Garden: Redwood City, CA, 1977; pp. 71-5.
4. Chlan LL. Relationship between two anxiety instruments in patients

receiving mechanical ventilatory support. *J Adv Nurs* 2004;48:493-9. [PMID: 15533087]

5. Davey HM, Barratt AL, Butow PN, Deeks JJ. A one-item question with a likert or visual analog scale adequately measured current anxiety. *J Clin Epidemiol* 2007;60:356-60. [PMID: 17346609]

Acknowledgements

The project described was supported by the National Center for Advancing Translational Sciences (NCATS), National Institutes of Health (NIH), through grant #UL1 TR000002.

Table 1. Characteristics of the study population

	No.(Total=453)	%			
Age (years)			Health insurance		
18–29	14	3%	Yes	448	98.9%
30–39	31	6.8%	No	3	0.6%
40–49	51	11.2%	History of Skin Cancer		
50–59	96	21.1%	Yes	280	61.8%
60–69	124	27.3%	No	173	38.1%
> 70	135	29.8%	History of Mohs surgery for removal of skin cancer		
Race			Yes	216	47.6%
White	400	88.3%	No	237	52.3%
African American	7	1.5%	If yes, how many?		
Hispanic	18	3.9%	One	75	34.6%
Asian/Pac Islander	12	2.6%	Two	52	24%
Native American	5	1.1%	Three	28	12.9%
Other	10	2.2%	Four	14	6.4%
Education			Five or more	47	21.7%
Less than high school	8	1.7%	I am here for		
High school graduate	119	26.2%	General Dermatology visit		
Undergraduate	217	47.9%	Acne	5	1.1%
Graduate	105	23.1%	Psoriasis	2	0.4%
Living Area			Eczema	4	0.8%
Rural	81	17.8%	Skin cancer skin check	74	16.3%
Suburban	254	56.0%	Warts	1	0.2%
Urban	113	24.9%	Urticaria/Hives	2	0.4%
Household income (\$)			Bacterial Skin infection	1	0.2%
< 15,000	36	7.9%	Hair loss	3	0.6%
15,000–40,000	53	11.6%	No reason given	318	70.1%
40,001–60,000	67	14.7%	Other	41	9.0%
60,001–100,000	135	29.8%			
>100,001	147	32.4%			