

Atopic Dermatitis Oral Therapies: What Are Patients Learning on YouTube?

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PRACTICE POINTS

- Patient-based YouTube videos comprised the majority of videos on oral therapies for atopic dermatitis, with the greatest views and interaction ratio.
- Most YouTube videos on this topic contained a neutral tone and Grade B recommendations, thus meriting production of more evidence-based videos in collaboration with patients on the YouTube platform.

To the Editor:

Oral immunosuppressive therapies are prescribed for moderate to severe atopic dermatitis. Patients often consult YouTube to make informed decisions about these therapies. In the United States, most health-related online searches are initiated through a search engine, which frequently leads to social media sites such as YouTube. Recent studies have examined the reasons why users turn to the Internet for health-related information, indicating that users typically seek specific information regarding health concerns.^{1,2} Furthermore, social media platforms such as YouTube are a popular means of sharing health information with the public.³⁻⁵ Currently, YouTube has more than 1 billion registered users, and 30 million health-related videos are watched each day.⁶ Almost one-third of US consumers use YouTube, Facebook, and Twitter to obtain medical information.⁷ YouTube is a versatile tool because of its video-discovery mechanisms such as a keyword-based search engine, video-recommendation system, highlight feature for videos on home pages, and the capacity to embed YouTube videos on various web pages.⁸ Searchers use videos that are short, fast

paced, emotion evoking, from credible sources, recently uploaded, and relevant to the searcher for aiding in health decisions.⁹ Furthermore, studies have demonstrated YouTube's capacity to support a change in attitude and increase users' knowledge. In fact, YouTube had higher impact on recall, attitudes, and behaviors when compared with written materials on other social media platforms, such as Facebook and Twitter.⁹ We conducted a cross-sectional study to examine the quality of YouTube videos on oral therapies for atopic dermatitis, such as cyclosporine, methotrexate, azathioprine, and mycophenolate mofetil.

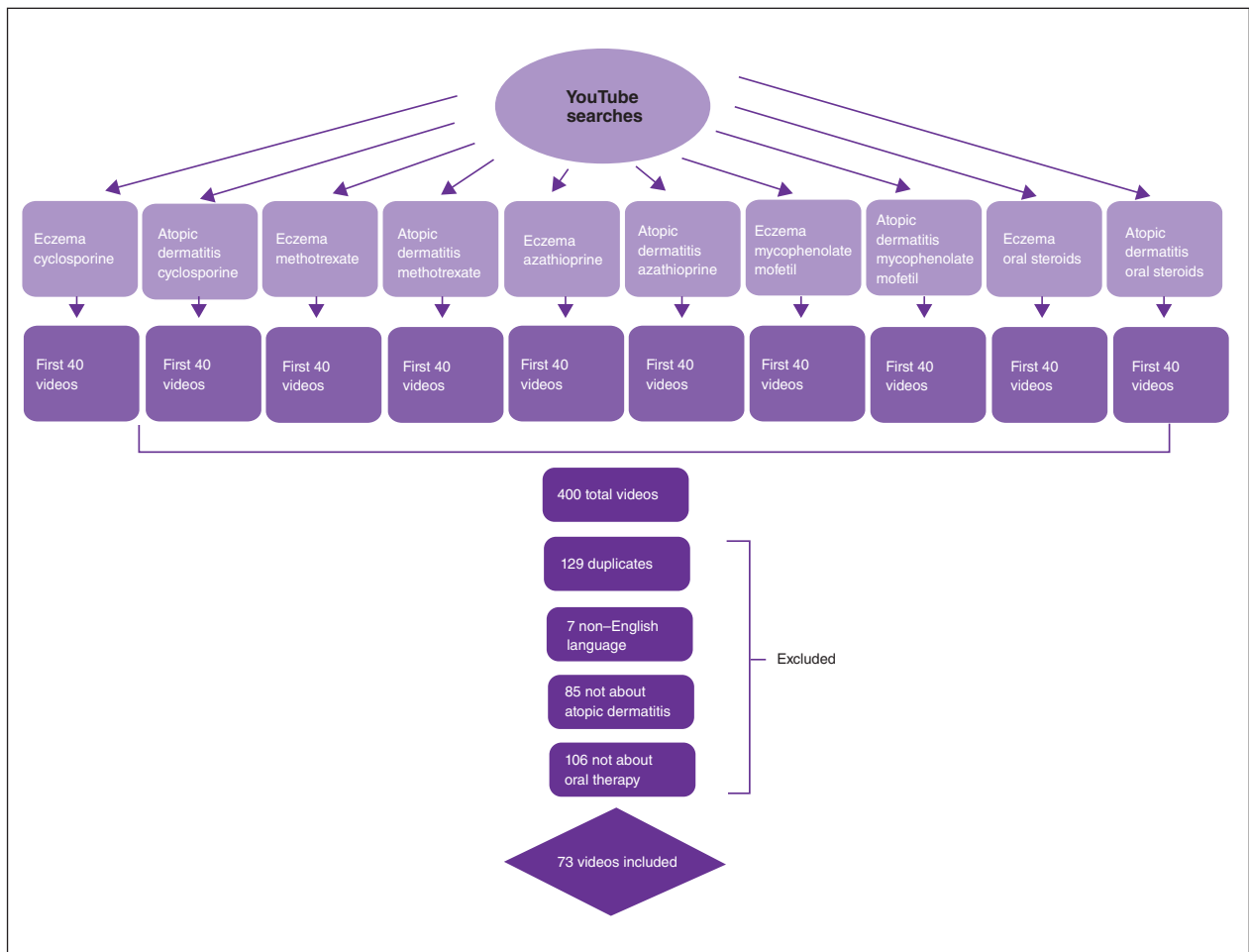
On April 23, 2020, we performed 8 searches using a private browser with default filters on YouTube (Figure). Injectables were not included in the analysis, as the YouTube experience on dupilumab previously has been investigated.¹⁰ The top 40 videos from each search were screened by 3 researchers. Duplicates, non-English-language videos, and videos that did not discuss atopic dermatitis or oral therapies were excluded, resulting in 73 videos included in this analysis. Testimonials generated by patients made up 39 of 73 (53.4%) videos. Health care professionals created 23 of 73 (31.5%) videos, and educators with financial interest created 11 of 73 (15.1%) videos. The dates of production for the videos spanned from 2008 to 2020.

The major topics addressed in the videos were symptomatic changes (63 [68.8% of all topics discussed]), adverse effects (52 [67.5%]), and quality-of-life changes (37 [48.1%]). Of the videos included, the majority (42/73 [57.5%]) contained a neutral tone about the medication, citing advantages and disadvantages with therapy, while 22 of 73 (30.1%) had an encouraging tone, and 9 of 73 (12.3%) had a discouraging tone. Regarding videos with positive tones, there were 17 videos on

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Algorithm for YouTube searches on oral therapies for atopic dermatitis and process of video exclusion.

cyclosporine, 9 on azathioprine, 7 on methotrexate, 4 on oral steroids, and 2 on mycophenolate mofetil. Regarding videos with negative tones, there were 4 on cyclosporine, 3 on azathioprine, 2 on methotrexate, and 2 on mycophenolate mofetil.

Of the videos made with financial interest, the majority (28/34 [77.8%]) were more suitable for informing health care providers rather than patients, containing jargon as well as complex information on clinical trials, dosing, and mechanisms of action. From the videos discussing clinical recommendations, there were 9 of 73 (12.3%) Grade A recommendations (eg, citing evidence-based information and clinical trials) and 64 of 73 (87.7%) Grade B recommendations (eg, anecdotal information on patient experience). Thirty-seven of 73 (50.7%) videos were evidence based, and 36 of 73 (49.3%) were non-evidence based. Six videos were patient-oriented news broadcasts.

Patient-generated testimonials had the most views (mean, 9238.4) and highest interaction ratio (the sum of likes, dislikes, and comments divided by the number of views)(mean, 0.027), while health care provider-generated videos had fewer views (mean, 9218.7) and

a lower interaction ratio (mean, 0.011). Financial-based videos had 4233.4 views on average, with an average interaction ratio of 0.014. Based on these results, biased, patient-generated content comprised greater than 50% of YouTube videos about oral therapies for atopic dermatitis and was quite likely to be engaged with by users. Thus, these patient testimonials have great potential to affect decision-making.

The high number of patient-generated videos about oral therapies was consistent with prior studies of YouTube videos about therapies for numerous conditions.¹¹⁻¹³ Dermatologists should consider utilizing YouTube for providing evidence-based, patient-oriented information about novel therapeutics. They may consider collaborating with patients to assist with their creation of YouTube videos and directing patients to credible resources by the American Academy of Dermatology and Canadian Dermatology Association for decision-making.

Importantly, this analysis is limited by its lack of quality-assessment tools for video-based resources such as JAMA score and DISCERN score.^{14,15} However,

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these metrics have limited ability to evaluate audiovisual elements, indicating the need for novel tools to score their validity.

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