Original Article

HEALTH SCIENCES
MEDICINE

DOI: 10.32322/jhsm.1357063
J Health Sci Med. 2023;6(6):1302-1306

Anoplasty and information pollution in health on YouTube

Ömer Bilgehan Poyrazoğlu

Department of General Surgery, Faculty of Medicine, Niğde University, Niğde, Turkey

Cite this article as: Poyrazoğlu ÖB. Anoplasty and information pollution in health on YouTube. *J Health Sci Med.* 2023;6(6):1302-1306.

Received: 08.09.2023 ◆ **Accepted**: 10.10.2023 ◆ **Published**: 29.10.2023

ABSTRACT

Aims: One of the most fundamental human rights is the right to information. The aim of our study is to investigate the accuracy, reliability and comprehensibility of the videos made on YouTube about anal stenosis. However, users often do not question this information's accuracy, adequacy, and efficiency. Anal stenosis is a disease that we frequently encounter for iatrogenic reasons, especially after post hemorrhoidectomy. When many publications are reviewed, anal stenosis can be seen in 1.2%-10% of patients undergoing hemorrhoidectomy.

Methods: Our study primarily and mainly YouTube videos about anoplasty published in English were preferred. However, when sufficient videos could not be reached scientifically, other videos were translated into English and included in the study. As of March 1, 2021, "anoplasty" was typed into the youtube search engine, and Thirty-eight videos of the most relevant videos on this subject were examined.JAMA,DISCERN,GQS was used for assessment in this study.

Result: The averages of the JAMA, DISCERN, and GQS fitness parameters used in the study were found to be 2.55 (1-4), 36.58 (18-59), and 2.84 (1-5), respectively. Of the 38 videos evaluated, 7 got 5 points according to GQS, and 8 got 4 points according to JAMA. According to DISCERN, none of them got full points. It could get a maximum of 59 points. It was also a single video. A statistically significant relationship was found among these parameters (GQS, JAMA, DISCERN) ($p<.05$). There was no significant relationship between view rate, like rate, and VP index. No statistically significant relationship was found in comparing these parameters with the individual GQS, JAMA, DISCERN scores. ($p > .05$)

Conclusion: We believe that this study will contribute to those who will share about health on YouTube within the framework of more accurate and scientific rules; therefore, it will raise awareness. Primarily this is necessary and essential for videos made in the name of health.

Keywords: Anal stenosis, health, YouTube, surgery, information pollution

INTRODUCTION

One of the most fundamental human rights is the right to information. Today, people generally use the internet to access this information. Technological products; For example, smartphones, tablets, computers are intermediary elements in accessing the internet. However, users often do not question this information's accuracy, adequacy, and efficiency. The importance of social media emerges here.[1] The significance of videos on social media, especially in information sharing, has come to the fore with YouTube, Facebook, and Twitter. In social media, YouTube is an application that has more than 1 billion users and is the most referenced as a source of information. For this reason, video content is critical.[2]

In a study, it has been revealed that about half of the data searched on the internet is about health. People often search for doctors' diagnoses, treatments, and approaches through the internet.[3,4] However, informative research and presentations made with YouTube are incomplete and insufficient as a source of accurate information. In these sources, information pollution is more prominent. In addition, this information is not presented so that the other party can understand. 1.9 billion people apply for health every month to this data. However, studies have shown that the ingredient quality of these videos is also inadequate. People need more accurate information.[5-9]

This study investigated how anal stenosis is explained on YouTube.

Anal stenosis is a disease that we frequently encounter for iatrogenic reasons, especially after post hemorrhoidectomy. When many publications are reviewed, anal stenosis can be seen in 1.2%-10% of patients undergoing hemorrhoidectomy. This disease, which occurs with stenosis in the anal canal and difficulty in defecation, can also occur after inflammatory bowel diseases, anal fissures, radiotherapy, venereal diseases, chronic laxative addiction, and tuberculosis. It can also

Corresponding Author: Öbilgehan Poyrazoğlu, obp80@hotmail.com

be seen congenitally in newborn children.[10,11] Anoplasty is one of the most preferred treatment methods in surgery in such patients.

The aim of our study is to investigate the accuracy, reliability and comprehensibility of the videos made on YouTube about anal stenosis and, also the adequacy and of its treatment and approaches.

METHODS

Because animals and humans were not included in this study, the study was not confirm by the ethics committee. All procedures were carried out in accordance with the ethical rules and the principles.

Our study primarily and mainly YouTube videos about anoplasty published in English were preferred. However, when sufficient videos could not be reached scientifically, other videos were translated into English and included in the study. As of March 1, 2021, "anoplasty" was typed into the youtube search engine, and Thirty-eight videos of the most relevant videos on this subject were examined. We cannot reach any other relevant videos on YouTube. Sponsored and advertising videos were excluded from this study. The videos deemed suitable for the study were reviewed and evaluated by an anatomist and two general surgeons. Thirty-eight videos were included in the study by examining whether they contain animation, the amount of views, the amount of likes, the amount of dislikes, sources, contents, and lengths. Videos were categorized according to their source. Surgical techniques were applied, and patient information was classified separately. Quality and conformity assessments were made by calculating the evaluated videos' Journal of American Medical Association (JAMA), DISCERN, and Global Quality scores (GQS). The amount of likes and views was multiplied to reach the video power index(vpindex). Considering these results, video popularity was evaluated.

A four-part JAMA score was used to measure the reliability and accuracy of the published video information. In this scoring, a score between one and zero is given for each section (Authority, Bibliography, Copyright, Relevance). Thus, a total value between 0 and 4 is obtained with JAMA scoring (Table 1).

Table 1. JAMA Score

JAMA scoring system rating sections	No	Yes
Authorship authors and contributors,their affiliations, and relevant credentials should be provided	0	1
Attribution references and sources for all content should be listed clearly,and all relevant copyright information should be noted	0	1
Disclosure website "ownership" should be prominently and fully disclosed,as should any sponsorship	0	1
Advertising, underwriting, commercial funding arrangements or support,or potential conflicts of Interest	0	1
Currency dates when content was posted and updated should be indicated	0	1

The DISCERN score was used for the reliability of the videos watched and the accuracy and suitability of the treatment options. This scoring consists of 16 questions. The first eight questions measure the evaluation of the reliability of the videos, the following six questions about the features of the treatment alternatives, and the 15th question about the general quality. every question is scored between 1 and 5. 16-26 points are very inadequate, 27-38 points are insufficient, 39-50 points are moderate, 51-62 points are good, and 63-75 points are excellent (Table 2).

Table 2. DISCERN Score

Section 1—Is the publication reliable?	Section 2—How good is the quality of information?
1.Are the aims clear?	9. Does it describe how each treatment works?
2.Does it achieve its aims?	10. Does it describe the benefits of each treatment?
3. Is it relevant?	11. Does it describe the risks of each treatment?
4. Is it clear what sources of information were used to compile the publication?	12. Does it describe what would happen if no treatment is used?
5. Is it clear what sources of informaiton used in the publication?	13. Does it describe how the treatment choices affect overall quality of life?
6. Is it balanced and unbiased?	14. Is it clear that there may be more than one possible treatment choice?
7. Does it provide details of additional sources of support and information?	15. Does it provide support for shared decision-making?
8. Does it refer to areas of uncertainty?	Section 3—Overall rating of the publication? 16. Based on the answers to all of the above questions, rate the overall quality of the publication as a source of information about treatment choices

We also evaluated the usefulness of patients, accessibility to information, general information flow, and adequacy level of information with the Global Quality Scoring system. In this classification, scoring is done between 1 and 5. The lowest quality videos are evaluated with 1 point and the highest with 5 points (Table 3).

Table 3. Global quality score

Score	Global score description
1	Poor quality, poor flow of the site, most information missing, not at all useful for patients
2	Generally poor quality and poor flow, some information listed but many important topics missing of very limited use to patients
3	Moderate quality, suboptimal flow, some important information is adequately discussed but others poorly discussed, somewhat useful for patients
4	Good quality and generally good flow, most of the relevant information is listed, but some topics not covered, useful for patients
5	Excellent quality and excellent flow, very useful for patients

In this study, it was evaluated whether there is a statistical relationship among vpindex, likes, dislikes, viewing rates, the amount of days to upload to the internet, as well as whether there is JAMA, DISCERN, GQS, whether there is animation content, content type and whether there is a source of uploading to the internet.

Like rates and viewing, rates give information about how people who research information on youtube like, dislike, and watch.

A video's engagement rate is calculated based on the amount of likes, dislikes, and comments it receives based on the amount of video views.

Because animals and humans were not included in this study, the study was not confirm by the ethics committee.

Statistical Analysis

Frequency and percentage analysis were used for categorical variables in the data, and mean, and standard deviation were given for descriptive statistics and numerical variables. Kolmogorov-Smirnov and Shapiro-Wilk tests were used for normal distribution tests in GQS, DISCERN, and JAMA scores. Pearson correlation analysis technique was used to evaluate the relationships between variables (GQS, JAMA, DISCERN). The level of significance in the calculations was accepted as $p < 0.05$. Analyzes were made with SPSS 24.0 software

RESULT

Thirty-eight videos about anal stenosis were reviewed in our study. There were not enough youtube videos related to this field. The average video length (Minimum-Maximum) values were 415 (18-2404) seconds. The average amount of watching videos was 38729 (2741-970175). At the same time, the amount of likes, dislikes, uploads, and video power indexes(vpindex) of these videos was also evaluated. Their averages are 140 (0-3700), 22 (0-642), 1078 (8-3429), and 64 (0-1900), respectively. Like rate and view rates were 90 (64-100) and 72 (0-2230), respectively (Table 4). It was also evaluated whether the videos included in the study were academic or not. 15.8% (6) were academic and 84.2% (32) were non-academic. These videos were also about 100% surgical technique and approach in terms of content. The averages of the JAMA, DISCERN, and GQS fitness parameters used in the study were found to be 2.55 (1-4), 36.58 (18-59), and 2.84 (1-5), respectively. Of the 38 videos evaluated, 7 got 5 points according to GQS, and 8 got 4 points according to JAMA. According to DISCERN, none of them got full points. It could get a maximum of 59 points. It was also a single video (Table 5).

Table 4. General features of videos

Features	Minimum	Maximum	Mean
Length	18	2404	415.29
Number of views	2.741	970175.000	38728.98839
Number of like	0	3700	140.05
Dislikes	0	642	22.50
Number of days of uploading	8.0	3429.0	1078.500
Like rate	64.00	100.00	90.2110
View rate	.00	2230.29	72.3246
Video Power index	.00	1900.52	63.8092

Table 5. Correlations

		GQS	DISCERN	JAMA	View ratio	Like ratio	v pik
GQS	Pearson correlation	1	.819**	.795**	.265	-.047	.265
DISCERN	Pearson correlation	.819**	1	.863**	.206	-.183	.204
JAMA	Pearson correlation	.795**	.863**	1	.243	-.301	.242

*p<.01

A statistically significant relationship was found among these parameters (GQS, JAMA, DISCERN) ($p<.05$). There was no significant relationship between view rate, like rate, and vpindex. These values were 72, 90, 64, respectively. There was no statistically significant relationship between these parameters and the individual GQS, JAMA, and DISCERN scores ($p>.05$).

DISCUSSION

Our study aims to evaluate the suitability, quality, and adequacy of YouTube videos in the approach to anal stenosis, which has not been investigated before and is frequently observed in the community after hemorrhoid surgeries. Thirty-eight videos about anal stenosis were included in this study. As it is known, YouTube has been sharing videos as a social media source since 2005. However, concerns about the adequacy of this source of information persist among physicians.[12] The fact that the internet is the first choice for health-related applications has directed the researchers to YouTube and encouraged them to research this subject. Scientists have written many publications about YouTube. Afterward, publications were started to review the articles on this subject.[13,14] In this study, 6 (15.89%) videos were created by academic sources, and independent physicians created 32 (84.2%) videos. However, the videos were not in a way that people could understand the diseases and solutions, but rather in a way that kept the surgeries in the foreground. It focused on how surgical approaches were performed rather than treatment options. While discussing treatment options with patients, this situation may create prejudice and harm the patients.[15]

In the statistical analysis, the like rate ratio was high. View rate was lower than like rate rates, vpindex was moderate. This result may be since those watching YouTube videos are not scientific professionals. In addition, health-related YouTube videos may be of interest to non-professionals, which can affect data. Most independent physicians may have uploaded these videos for advertising purposes. From this point of view, although everyone can access the videos, the quality and appropriateness of the videos should only be assessed by professional scientists.

DISCERN score was evaluated as poor in the videos included in the study. It was measured as intermediate in other scorings. 7 of the 38 videos included in the study according to GQS and eight according to JAMA received total points, and this amount was 0 in DISCERN. Although there was a statistical relationship among all three scorings, the insufficient amount of videos included in the study on YouTube may have caused the GQS and JAMA to be intermediate because DISCERN scoring is more sensitive than others. According to the DISCERN score, the amount of moderate and good videos was 16 and 3, respectively. Of these videos, six were academic, and 13 were personal doctor videos. Others were rated as inadequate and very inadequate. This situation may be because the videos were shot for marketing purposes rather than informative, and they were made of poor quality and unethical. The information in these videos emphasized that the treatment consisted of only one therapeutic option for the disease and that this approach was also successful. It did not provide other options for the patients or the researchers with information about the disease. It was not explained that this anal stenosis could be due to functional or anatomical reasons and treatment options. Information was lacking that the changes in anatomy could be caused by the deterioration of the elastic structure in the anoderm or by functional changes from the hypertonic sphincter.[16] People who researched the disease were informed about a single disease and treatment. The severity of stenosis and the importance of the surgeon's experience and information about many surgical corrective techniques are the subjects emphasized in the literature. However, this information was not presented to people who researched on the internet on YouTube.[17]

CONCLUSION

Thirty-eight videos about anoplasty that we took in this study showed that most of the videos uploaded to YouTube were published to advertise people or show their skills. Rather than informing people, these videos make presentations of one-option therapy. These presentations are also inadequate, incomplete, and unethical sharing for anoplasty. Although like rate, view rate, and vpindex rates are considered in the evaluation, the results here may not form the correct opinion about the videos. Scientific scoring (DISCERN, GQS, JAMA) and professional scientists are needed to evaluate YouTube videos more accurately. Primarily this is necessary for videos made in the name of health. We believe that this study will contribute to those who will share health videos on YouTube within the framework of more accurate and scientific rules; therefore, it will raise awareness

ETHICAL DECLARATIONS

Ethics Committee Approval: Because animals and humans were not included in this study, the study was not confirm by the ethics committee.

Informed Consent: Because animals and humans were not included in this study, informed consent not need.

Referee Evaluation Process: Externally peer reviewed.

Conflict of Interest Statement: The authors have no conflicts of interest to declare.

Financial Disclosure: The authors declared that this study has received no financial support.

Author Contributions: All the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

Acknowledgment: Hacı Bolat, Selim Cınaroglu, Asistant Prof. For suggestions

REFERENCES

1. Fox S. The social life of health information, 2011. California Healthcare Foundation, 2011. Available at: http://pewinternet.org/Reports/2011/Social-Life-of-Health-Info.aspx
2. Naslund JA, Grande SW, Aschbrenner KA, Elwyn G. Naturally occurring peer support through social media: the experiences of individuals with severe mental illness using YouTube. *PLoS One.* 2014;9(10):e110171.
3. Fox S, Rainie, L. The online health care revolution: How the web helps Americans take better care of themselves. Washington, DC: Pew Charitable Trusts. 2000. Available at: https://www.pewresearch.org/internet/2000/11/26/the-online-health-care-revolution/
4. Samuel N, Alotaibi NM, Lozano AM. YouTube as a Source of Information on Neurosurgery. *World Neurosurg.* 2017;105:394-398.
5. Dubey D, Amritphale A, Sawhney A, Dubey D, Srivastav N. Analysis of YouTube as a source of information for West Nile Virus infection. *Clin Med Res.* 2014;12(3-4):129-132.
6. Statistics for YouTube, https://www.youtube.com/yt/press. Accessed April 23, 2019. https://www.youtube.com/yt/press
7. Kunst H, Groot D, Latthe PM, Latthe M, Khan KS. Accuracy of information on apparently credible websites: survey of five common health topics. *BMJ.* 2002;324(7337):581-582.
8. Aydın M, Mert A. YouTube'da lateral epikondilit videolarının değerlendirilmesi. *Bagcilar Med Bull.* 2021;6:390-396.
9. Mert A, Bozgeyik B. Quality and content analysis of carpal tunnel videos on YouTube. *Indian J Orthop.* 2021;56(1):73-78.

10. Brisinda G. How to treat haemorrhoids. Prevention is best; haemorrhoidectomy needs skilled operators. *BMJ.* 2000;321(7261): 582-583.
11. Maria G, Brisinda G, Civello IM. Anoplasty for the treatment of anal stenosis. *Am J Surg.* 1998;175(2):158-160.
12. Greenberg L, D'Andrea G, Lorence D. Setting the public agenda for online health search: a white paper and action agenda. *J Med Internet Res.* 2004;6(2):e18.
13. Keelan J, Pavri-Garcia V, Tomlinson G, Wilson K. YouTube as a source of information on immunization: a content analysis. *JAMA*. 2007;298(21):2482-2484.
14. Madathil KC, Rivera-Rodriguez AJ, Greenstein JS, Gramopadhye AK. Healthcare information on YouTube: A systematic review. *Health Informatics J.* 2015;21(3):173-194.
15. Sommerhalder K, Abraham A, Zufferey MC, Barth J, Abel T. Internet information and medical consultations: experiences from patients' and physicians' perspectives. *Patient Educ Couns.* 2009;77(2):266-271.
16. Casadesus D, Villasana LE, Diaz H, et al. Treatment of anal stenosis: a 5-year review. *ANZ J Surg.* 2007;77(7):557-559.
17. Habr-Gama A, Sobrado CW, de Araújo SE, et al. Surgical treatment of anal stenosis: assessment of 77 anoplasties. *Clinics (Sao Paulo).* 2005;60(1):17-20.