



YOUTUBE AS A SOURCE FOR PATIENT EDUCATION REGARDING PERCUTANEOUS MITRACLIP

Harsh Gupta*¹, Rahul Gupta ², Rajiv Gupta MS ³ and N S Neki ¹

¹Department of Medicine, Government Medical College, Amritsar, India

²Department of Medicine, Westchester Medical College, New York Medical College,
Valhalla, New York, USA

³Department of Surgery, Chintpurni Medical College and Hospital, Bungal, India

ARTICLE INFO

Article History:

Received 9th October, 2017

Received in revised form 25th
November, 2017

Accepted 23rd December, 2017

Published online 28th January, 2018

Key words:

YouTube, MitraClip, Internet, patient
education

ABSTRACT

Background : YouTube may have an influential role on the public's understanding of health-related information. This study was designed to review and analyze the information available to patients on YouTube pertaining to percutaneous MitraClip procedure.

Methods: Two separate researchers queried YouTube for the term "MitraClip". The videos from first 10 pages were reviewed and categorized according to content, number of views, "likes" and "dislikes".

Results: Of the first 72 videos reviewed, 8 videos were categorized as patient education, 5 as advertisements, 12 as intraoperative videos, 4 as patient experiences, 17 as health care provider education including conferences, and 3 as public awareness. 24% of the videos were unrelated to MitraClip procedure (17/72) and 6 were not depicted in English language. Overall, intraoperative videos including animations of the procedure were the most viewed video type (Figure 3).

Conclusion: You Tube provides a wide range of health-related information with easy accessibility for patients and a potentially excellent source for patient education. Unfortunately the information posted is not regulated. This study shows that available information for percutaneous MitraClip procedure could be improved if authorities in the field congregated and standardized education for patients.

Copyright © 2018 Harsh Gupta et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION

Mitral regurgitation (MR) is the most common cardiac valvular disease in the United States with approximately 250,000 patients diagnosed with MR annually (1, 2). Percutaneous catheter-based intervention that parallels surgical principles for valve repair have been developed and have been proposed as an alternate measure in high-risk patients. The MitraClip® device (Evalve, Menlo Park, CA, USA) is one such therapy which was approved by FDA in October 2013 and was intended to treat patients with symptomatic degenerative mitral regurgitation who are too high a risk for surgery. Nearly 17,000 patients have been implanted with MitraClip device worldwide as of September 2014 (3). Patient education is an important approach to teach individuals about indications and contraindications regarding MitraClip. In a survey of primary care physicians, most of physicians expressed concerns about the accuracy of online medical information and felt that inaccurate information could adversely impacted doctor-patient relationship (4). In a study, nearly 72% patients who were looking for health related information believed most of the available information thus

indicating that physicians and health care personnel's must play an essential role in communicating reliable medical information (5). With availability of free broadcasting websites such as YouTube, it serves as a global platform for sharing health related information. The Internet has evolved as an essential tool in the recent era and with its easy access, it is the most frequent source of health related information (6). About 53% of the adults accessed Internet for health related issues in United States, the number that has significantly risen to 71% in 2 years (7). Also, research on YouTube and its implications in public health is still immature. To our knowledge, there are no studies that evaluated role of social media such as YouTube with information regarding MitraClip. Given the vast majority of information regarding MitraClip on YouTube and immense public health importance, we conducted an observational study to evaluate the usefulness of YouTube videos on MitraClip.

MATERIALS AND METHODS

YouTube search engine was queried on October 5th, 2014 with the search term 'MitraClip'. The results were organized into

*Corresponding author: Harsh Gupta

Department of Medicine, Government Medical College, Amritsar, India

an excel sheet and 2 independent researchers (HG and RG) reviewed the available videos on the first 10 pages on the same day. All videos including unrelated content, or videos in language other than English or videos beyond page ten were excluded from the analysis. The videos were categorized into 6 categories based on their content: patient education, advertisements, patient testimonials, intraoperative videos, health care provider education and public awareness (Figure 1, 2). Parameters such as total number of views (Figure 3), average views, total likes (Figure 4), average likes, total dislikes and average dislikes were also recorded.

RESULTS

A total of 72 videos were reviewed. 24% videos (n=17) were classified as health care provider education that generated maximum number of videos and second highest views. The aim of these videos was to educate nurses, residents, fellows, attending physicians and other health care workers. This category generated a total of 1.9 average likes. Only 16.6 % (n=12) videos were categorized as intra-procedure videos. These videos were recorded in cardiac catheterization laboratory demonstrating the actual procedure. This generated a total 123,801 views with 131 total likes and 14 total dislikes. Overall, this generated most viewed video type with maximum likes and dislikes.

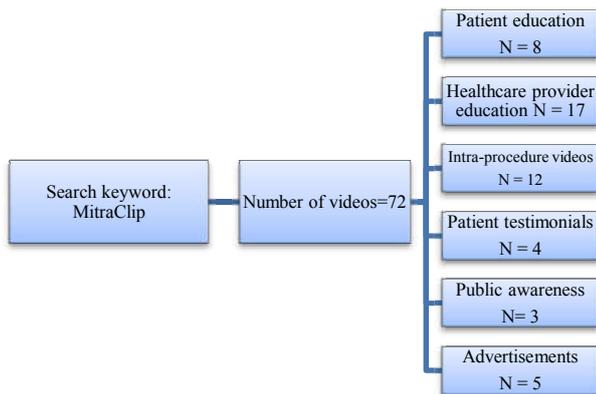


Figure 1 Flowchart demonstrating each video category

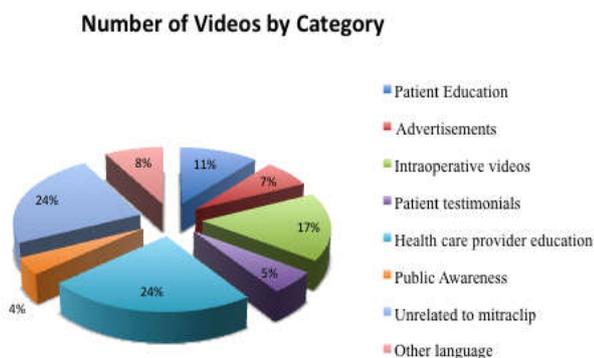


Figure 2 Pie chart demonstrating video content by category

8 videos (11.1%) were categorized under “patient education”. These videos were created by hospitals, government agencies, and physicians; primarily intended to educate patients about the procedure, indications, contraindications, and complications related to the procedure. This category generated a total of 6,125 views. On an average, these videos were viewed 765.8 times and generated 1.25 average likes and

0.375 dislikes. Advertisements comprised 7% of total videos (n=5). All these videos were created by the hospitals promoting about safe MitraClip implantation in their respective institutions. There were a total 12,191 views with 2438 average views generating average of 0.2 likes. Patient’s personal experience (patient testimonials) comprised 5.55% of total videos. These videos were created by the patients or by their family members and served as small movies regarding pre-operative and postoperative course. Mean views in this section was 734.25 with 3 average likes.

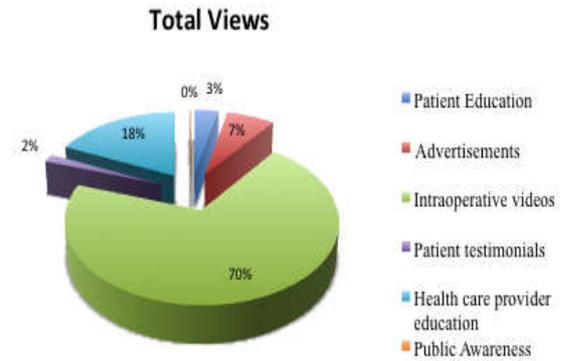


Figure 3 Pie chart demonstrating video category by total number of views

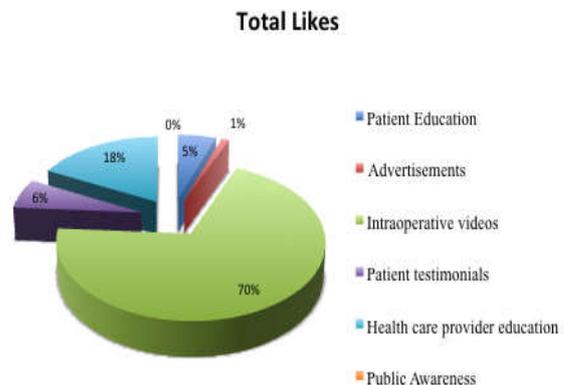


Figure 4 Pie chart demonstrating video category by total likes

Only 4.1% (n=3) videos were classified in the section for public awareness. Public awareness was aimed to create awareness amongst high school and college graduates. Public awareness generated the least number of views (n=384) and zero likes and dislikes. 24% (n=17) and 8.33% (n=6) were categorized as unrelated videos and videos other than English language, respectively.

DISCUSSION

YouTube is the most common video-sharing website established in 2005 that allows users to upload, view and share videos (8). It is a free online web based portal where users can opine their taste about the videos by clicking the ‘like’ and ‘dislike’ button and also allows them to make comments on the videos. The website is also capable to generate ‘how many times a particular videos is viewed’. Hence it serves as an influential tool in propagation of scholastic material from patient’s personal experience to professionally created educational content. It has been ranked third consistently amongst the most visited website (9). Thus, YouTube indeed has not only created a societal influence but also has being

used as tool for education regarding healthcare related information, medical breakthroughs, medical updates, and journal articles not only for laypersons but also for health care providers. To the best of knowledge, this is the first study to evaluate the usefulness and accuracy of YouTube as a source of information on MitraClip since its approval by FDA in 2013. Studies in the past have evaluated the role of web based learning especially YouTube on acute myocardial infarction (10), immunization (11), cardiopulmonary resuscitation/basic life support (12), and cardiac pacemaker (13). In our study we found that there were many videos available online, however videos from first 10 pages were reviewed for all practical purposes. We found that intraoperative videos constituted the maximum number of videos on YouTube with maximum likes. Taken as whole, intraoperative videos on MitraClip emphasized the procedural steps in detail. Similarly, videos from the category 'health care provider education' were second in line in terms of totals views and likes. However, none of the videos discussed about post procedure cardiac rehabilitation. Also, the lack of information from professional organizations such as American College of Cardiology or American Heart Association regarding videos on MitraClip implantation on YouTube is of particular concern as in our study video under the section public awareness accounted the least. This also brings up an important issue of reliability of the contents that are available on YouTube. Absence of any quality control and lack of peer review process regarding medical information available to general public has resulted in posting of inaccurate and misleading health information. The finding in our study calls for quality improvement for online education. In the future, it may be worthwhile if there are considerations for standardization of medical information, labeling of content by category (who creates or issues information) or professional society endorsing these videos, as current content may have an important impact on public health. We as the physicians must recognize that with easy access to web based portals, medical misinformation has a potential to influence patient attitudes and behaviors. Hence, it is imperative that physicians must counsel their patients regarding likelihood of medical misinformation and provide them with trustworthy resources for obtaining medical information. Additionally, more longitudinal studies assessing how people are using YouTube for health related information is needed.

CONCLUSION

Large amount of scientific videos were available online on MitraClip, viewers displayed a preference for intraoperative videos the most and least preferences for public awareness videos. With the ease to educate people regarding MitraClip in a minimal and cost effective way, professional societies should use this medium to disseminate accurate scientific information. The growing popularity of YouTube and its ability to reach and influence a worldwide audience, allows it to serve as an easy platform for web-based learning. Further research is needed to evaluate the influence of YouTube videos on patient's medical decision making.

References

1. Iung B, Baron G, Butchart EG, Delahaye F, Gohlke-Barwolf C, Levang OW, *et al.* A prospective survey of patients with valvular heart disease in Europe: The Euro Heart Survey on Valvular Heart Disease. *European heart journal.* 2003;24(13):1231-43.
2. Nkomo VT, Gardin JM, Skelton TN, Gottdiener JS, Scott CG, Enriquez-Sarano M. Burden of valvular heart diseases: a population-based study. *Lancet.* 2006;368(9540):1005-11.
3. http://www.mitraclip.com/tmvr_mitraclip_therapy. last accessed december 31, 2017
4. Murray E, Lo B, Pollack L, Donelan K, Catania J, Lee K, *et al.* The impact of health information on the Internet on health care and the physician-patient relationship: national U.S. survey among 1.050 U.S. physicians. *Journal of medical Internet research.* 2003;5(3):e17.
5. Morahan-Martin JM. How internet users find, evaluate, and use online health information: a cross-cultural review. *Cyberpsychology & behavior : the impact of the Internet, multimedia and virtual reality on behavior and society.* 2004;7(5):497-510.
6. Vance K, Howe W, Dellavalle RP. Social internet sites as a source of public health information. *Dermatologic clinics.* 2009;27(2):133-6, vi.
7. Pare G MJ, Sicotte C, *et al.* Internet as a source of health information and its perceived influence on personal empowerment. *Int J Healthc Inform Syst Informat.* 2009;4:1-18.
8. Hopkins JO. "Surprise! There's a third YouTube co-founder". USA Today. Retrieved November 29, 2008.
9. Alexa Traffic Rank for YouTube (three month average)" Alexa Internet Retrieved March 30, 2014.
10. Pant S, Deshmukh A, Murugiah K, Kumar G, Sachdeva R, Mehta JL. Assessing the credibility of the "YouTube approach" to health information on acute myocardial infarction. *Clinical cardiology.* 2012;35(5):281-5.
11. Keelan J, Pavri-Garcia V, Tomlinson G, Wilson K. YouTube as a source of information on immunization: a content analysis. *Jama.* 2007;298(21):2482-4.
12. Murugiah K, Vallakati A, Rajput K, Sood A, Challa NR. YouTube as a source of information on cardiopulmonary resuscitation. *Resuscitation.* 2011;82(3):332-4.
13. Hayes K, Mainali P, Deshmukh A, Pant S, Badheka AO, Paydak H. Utilization of YouTube as a Tool to Assess Patient Perception Regarding Implanted Cardiac Devices. *North American journal of medical sciences.* 2014;6(7):291-4.

How to cite this article:

Harsh Gupta *et al* (2018) 'Youtube As A Source For Patient Education Regarding Percutaneous Mitraclip', *International Journal of Current Medical and Pharmaceutical Research*, 4(1), pp. 2937-2939.