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Analysis of Turkish Content Endoscopic Ultrasonography Videos on Youtube: What is the Level of Information? By Whom are They Uploaded?

Youtube'daki Türkçe İçerikli Endoskopik Ultrasonografi Videolarının Analizi: Bilgilendirme Düzeyi Nedir? Kimler Tarafından Yükleniyor?

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Abstract

Introduction: Endoscopic Ultrasonography (EUS) is a method used in the diagnosis and treatment of abdominal diseases. It is a fact that internet platforms such as Youtube are frequently preferred by internet users for medical information purposes.
Objective: We aimed to investigate whether Turkish EUS videos on Youtube provide adequate and appropriate information sharing to the general population.
Method: The terms "endoscopic ultrasonography" and "EUS" were entered in the YouTube search field. The first 60 videos with Turkish content ranked according to the frequency of views were examined and after excluding 7 videos, a total of 53 videos were deemed suitable for final analysis. The EUS Data Quality Scale (EU-DQS), developed by us, and the Global Quality Scale (GQS), a validated scoring system, were used to assess the quality of the videos.
Results: The total number of views of the videos was 245,819 and the average number of likes and dislikes were 26.7 and 1.2, respectively. 21 of the videos (39.6%) were uploaded by the endoscopist performing the procedure. The average EU-DQS score of the videos was 8.5 out of 20. The average EU-DQS value of the videos shared by doctors was 11.0, while the average value of the videos shared on health websites was 5.0. The GQS distribution of the videos was as follows: poor quality - 13 (24.5%); overall poor - 14 (26.4%); moderate quality - 17 (32.0%); good quality - 5 (9.43%); excellent quality - 4 (7.54%).
Conclusion: The information quality of the videos uploaded to Youtube by endoscopists performing EUS procedure was found to be more successful than the videos uploaded by other individuals and organisations. Considering the benefit of EUS with its minimally invasive aspect, we think that specialised endoscopists should be more active in producing and uploading videos.

Keywords: Endoscopic Ultrasound, Level of Information, Youtube.

Özet

Giriş: Endoskopik Ultrasonografi (EUS) abdominal hastalıkların tanı ve tedavisinde kullanılan bir yöntemdir. Youtube gibi internet platformlarının tıbbi bilgi amaçlı olarak internet kullanıcıları tarafından çok sık tercih edildiği bir gerçektir.
Amaç: Youtube'daki Türkçe içerikli EUS videolarının genel popülasyona yeterli ve uygun bilgi paylaşımını sağlayıp sağlamadığını araştırmayı amaçladık.
Yöntem: YouTube arama kısmına "endoskopik ultrasonografi" ve "EUS" terimleri yazılarak arama yapıldı. Görüntülenme sıklığına göre sıralanan Türkçe içerikli ilk 60 video incelenip 7 videonun hariç tutulması sonrası toplam 53 video son analiz için uygun görüldü. Videolar kalitesini değerlendirmek içi tarafımızca geliştirilen EUS Veri Kalite Skalası (EU-VKS) ve doğrulanmış bir puanlama sistemi olan Küresel Kalite Ölçeği (KKÖ) kullanıldı.
Bulgular: Videoların toplam görüntülenme sayısı 245.819 olup; ortalama beğeni ve beğenmeme sayıları sırasıyla 26,7 ve 1,2 oldu. Videoların 21'i (%39,6) işlemi gerçekleştiren endoskopist tarafından yüklenmişti. Videoların EU-DQS puanları 20 üzerinden ortalama 8,5'du. Doktorlar tarafından paylaşılan videoların EU-DQS ortalama değeri 11.0 iken sağlık web sitesi paylaşımlarının ortalama değeri ise 5.0 idi. Videoların GQS dağılımı şu şekildeydi: düşük kalite – 13 (%24,5); genel olarak zayıf – 14 (%26,4); orta kalite – 17 (%32,0); iyi kalite – 5 (%9,43); mükemmel kalite – 4 (%7,54).
Sonuç: EUS işlemini gerçekleştiren endoskopistler tarafından Youtube'a yüklenen videoların bilgilendirme kalitesi diğer kişi ve kuruluşların yüklediği videolara göre daha başarılı bulunmuştur. EUS'un minimal invaziv yönüyle sağladığı fayda göz önüne alındığında, konusunda uzman endoskopistlerin video üretmek ve yüklemek konusunda daha aktif olmaları gerektiğini düşünmekteyiz.

Anahtar Kelimeler: Bilgilendirme Düzeyi, Endoskopik Ultrason, Youtube.

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BACKGROUND

Since its first appearance in the medical community in the 1980s, endoscopic ultrasonography (EUS) has become an indispensable method in the evaluation of the structures of the gastrointestinal system and adjacent pancreato-biliary organs (1,2). EUS, which was initially used only for diagnostic purposes, has been recognised as a versatile procedure requiring a high level of experience for interventions and interventions to be performed in the luminal and biliary system. In general, the areas of use of interventional EUS can be divided into three. These are: transluminal drainage or access procedures to tissues around the lumen, injection therapy and EUS-guided applications to the liver (3,4).

In recent years, the frequency of use of the internet for medical information search has been increasing due to its easy and fast accessibility (5). Today, when 80% of internet users search the internet to access health data, the most preferred visual platform is Youtube (6,7). Although the scientific quality of many of its videos and the level of informing the public is a matter of serious debate, many scales have been developed to evaluate the quality of Youtube data (8).

The aim of this study was to analyse the reliability and informative level of Turkish videos related to Endoscopic Ultrasonography, which is a procedure that is frequently used today and requires high experience, and by whom they were uploaded.

MATERIAL AND METHODS

Video selection

The terms "endoscopic ultrasonography" and "EUS" were entered in the YouTube search section on 1 November 2023. Desai et al. showed that 95% of people watch only the first 60 videos while searching for online videos (9). After the search, the first 60 videos sorted according to the frequency of viewing were analysed by excluding videos without Turkish language option. Videos of 120 seconds or less were excluded from the study because they contained repetitive advertisements related to the sector. A total of 53 videos were deemed suitable for the final analysis after excluding 7 videos that did not contain voice-overs and were repetitive.

Identification of variables

The author who performed the analysis was an expert general surgeon who is a member of the Gastroenterological Surgery Association of Turkey. The videos were ranked according to the number of views from an independent Youtube account not belonging to the evaluator and the first 3 pages were analysed. For each video, the upload date, publishing time (seconds), total number of views, number of comments and total number of "like" and "dislike" presses were recorded. Videos were categorised according to the type of providers: videos uploaded by doctors' personal accounts, hospital accounts and medical websites.

Evaluation of quality

We used the EUS Data Quality Scale (EU-DQS), which was inspired by the Colonoscopy Data Quality Scale (C-DQS) and the Endoscopic Retrograde pancreatography (ERCP) Data Quality Scale (E-DQS) developed to evaluate video quality on the internet for previous studies (10,11). The EU-DQS consists of 12 statements including the definition of EUS, expectations before, during, and after the procedure, and each video is assigned a total score on a scale from 0 to 20 (Table 1). We also assessed the global quality score of each video with

the Global Quality Scale (GQS), a validated scoring system for rating the overall quality of healthcare videos (Table 2) (12). Data were recorded in Google Sheets.

Table 1. EUS Data Quality Score (EU-DQS)

Definitions	Point
Defines EUS (e.g. EUS as a procedure used in the diagnosis and treatment of gastrointestinal and pancreaticobiliary diseases)	1
Endoscopically, a scope is inserted into the stomach and a small ultrasound probe that emits sound waves at the end of the scope.	1
Indications for EUS as a diagnostic and therapeutic procedure (1 point for mentioning any of the indications below)	1
Malignant or benign lesions of the oesophagus and stomach	
Gallblader or common bile duct stones	
Biliary malignancies	
Ampulla tumors	
Pancreas malignancies	
Pancreatic cysts	
Mentions that the patient will have to give written informed consent form before the procedure	1
Recommends no food or drinks 6 h before the procedure	1
Describes that the doctor will advise ceasing certain medications before the procedure	1
Expectations during the procedure	
Mentions that the procedure will be performed under sedation	1
Provides information that the doctor will perform a biopsy or aspiration with a special needle for diagnostic and therapeutic purposes when necessary	1
Describes complications of the procedure (1 point each, maximum 4 points)	4
Pancreatitis	
Perforation	
Bleeding	
Adverse drug reaction	
Expectations after the procedure	
Mentions that the patient can feel bloating or abdominal pain after the procedure	1
Explaining that the procedure can be repeated in case of failure after the EUS procedure	1
Mentions that the duration of fasting after the procedure depends on the type of procedure and the patient's condition	1

Table 2. Global Quality Scale (GQS)

Point	Quality rating	Definition of quality
1	Poor quality	Poor flow, most information missing, not helpful for patients
2	Generally poor	Some information given but of limited use to patients
3	Moderate quality	Some important information is adequately discussed
4	Good quality	Good flow, most relevant information is covered, useful for patients
5	Excellent quality	Excellent flow, useful for patients

Work Ethics

Since no human or animal material was used for experimental clinical research purposes in our study and the data were generated from a social media platform open to daily use, ethics committee approval was not required.

RESULTS

Considering 53 videos, the total number of views of the videos was 245,819; the average views per video was 5219, while the number of views was placed in the range of 65 to 87,000 people. The videos were uploaded between January 2016 and October 2023. The average time since upload was 718.4 days, with a range from 13 to 2427 days. The average duration of the videos was 349 seconds, with a range from 122 to 1980 seconds. The average number of likes and dislikes per video was 26.7 and 1.2, respectively. The main characteristics of the videos analysed in the study are presented in Table 3.

Table 3. Main Features of The Analysed Videos (n=53)

Titles	Mean (Min-Max)
Days since upload	718,41(13-2427)
Running time of videos (saniye)	349,4(122-1980)
Views	5319(65-87000)
Likes	26,7(4-232)
Dislikes	1,2(0-17)
Comment	1,8(0-11)

Twenty-one (39.6%) of the videos were uploaded by the endoscopist performing the procedure, 18 (33.9%) by the YouTube account of a hospital organisation and 14 (26.4%) by medical websites.

The overall average EU-DQS score of the recorded videos was 8.5 out of 20. The average EU-DQS value of the videos shared by doctors was 11.0, while the average value of the videos shared by medical websites was 5.0. The GQS distribution of all analysed videos was as follows: poor quality - 13 (24.5%); overall poor - 14 (26.4%); moderate quality - 17 (32.0%); good quality - 5 (9.43%); excellent quality - 4 (7.54%). In terms of GQS by authorship, videos shared by physicians had higher quality rates.

Table 4. Video quality distribution according to upload source.

	Doctors	Hospital Channels	Medical Web Sites	Total
Videos, n (%)	21 (39,6)	18 (33,9)	14 (26,4)	53 (100)
EU-DQS	11,0 [7,0; 15.0]	6,0 [4,0; 9.0]	5.0[3,0; 7.0]	8,5 [3,0–15]
GQS, n (%)				
Poor quality	1(4,7)	5(27,7)	7(50,0)	13(24,5)
Generally poor	1(4,7)	8(44,4)	5(35,7)	14(26,4)
Moderate quality	12(57,1)	3(16,5)	2(14,2)	17(32,0)
Good quality	4(19,0)	1(5,5)	0(0,0)	5(9,43)
Excellent quality	3(14,2)	1(5,5)	0(0,0)	4(7,54)

Values are reported as median [interquartile range] unless indicated otherwise. E-UQS = EUS data quality score, GQS = global quality scale.)

DISCUSSION

Endoscopic ultrasound (EUS), which was initially used as a purely diagnostic imaging method, has evolved into a minimally invasive interventional procedure that provides an alternative to interventional radiological and open or laparoscopic surgical techniques (13).

This study is the first study to evaluate the information and data quality of Turkish videos about EUS, which has an important place in the diagnosis and treatment of many abdominal organs, shared on a very important social platform such as Youtube.

In our study, 53 EUS videos were analysed and the study was completed by using GQS, a scale whose quality and information level was verified with the EU-DQS score adapted by us. Although the scoring scores of the videos shared by physicians were higher than the studies in

the literature, it was found that the quality scores of the videos were low in general. The median of the total EU-DQS was 8.5 out of 20 (Table 4). Especially the level of information about the EUS procedure on medical websites is very superficial. Therefore, it is very important that critical details of the EUS procedure and patients' requests for information are taken into consideration by experts.

In a study conducted on 255 videos based on a scale called C-DQS which evaluates videos related to colonoscopy, the mean values of C-DQS and GQS were calculated as 5.38 and 2.31, respectively (10). In addition, the E-DQS value was found to be 6.5 and the GQS value was found to be 2.84 in the Korean study, which was the first study in which ERCP videos with English content were evaluated inspired by this scale (11).

In our study, the median value of EU-DQS was 8.5, which was higher than the two previous studies, but similar to the other two studies, the scores of videos shared by individuals or institutions other than physicians or healthcare professionals were calculated lower.

It is thought that the fact that health posts made on social media platforms such as Youtube, where access and video sharing is easy, are not subjected to any peer review will lead to the formation of a dirty information pool and mislead people (14). Concerns have been expressed that incomplete and inaccurate medical content sharing on this platform, where more than 1 billion people spend more than 1 billion hours a day on Youtube, may distract patients from treatment and patients may present with more complicated conditions(15).

Considering the number of views and likes expressed in Table 3 regarding the videos in our study and the prevalence of digestive system diseases in our society, more accurate guidance of patients about interventional procedures that require experience such as EUS will be very beneficial for public health.

Finally, our study has several limitations. Firstly, the evaluation of the quality of the videos can be seen as a subjective study; the reason is that we tried to determine the scores objectively by using a scoring system adapted from scoring systems that do not exist yet but have been defined in similar endoscopic procedures. Secondly, search results may change according to the search date and it is possible that the uploaded videos may change over time because YouTube is a dynamic website. Finally, since our study only includes Turkish videos, the results cannot be generalised for videos in other languages.

CONCLUSION

In conclusion, when the EUS videos on YouTube were carefully analysed, the information quality of the videos uploaded by the endoscopists performing the procedure was found to be higher, and the video content uploaded by other individuals and organisations negatively affected the overall quality. Considering the benefit of this procedure with its minimally invasive aspect, we think that specialised endoscopists should be more active to produce high quality videos on this subject.

Conflict of interest and funding disclosure

The author declares that he/she has no conflict of interest and has received no financial support from any organisation or individual for this study.

Author Contributions

Working Concept / Design **:** MCG
Data collecting **:** MCG

Data Analysis / Interpretation	**:** MCG
Writing Draft	**:** MCG
Technical Support / Material Support	**:** MCG
Critical review of content	**:** MCG
Literature Review	**:** MCG

REFERENCES

1. Dimagno, E., Regan, P., Wilson, D., Buxton, J., Hattery, R., Suarez, J. ve Green, P. (1980). Ultrasonik endoskop. Lancet , 315 (8169), 629-631.

2. Strohm, W. D., Phillip, J., Hagenmüller, F., & Classen, M. (1980). Ultrasonic tomography by means of an ultrasonic fiberendoscope. Endoscopy, 12(05), 241-244.

3. Peery, A. F., Crockett, S. D., Murphy, C. C., Jensen, E. T., Kim, H. P., Egberg, M. D., ... & Sandler, R. S. (2022). Burden and cost of gastrointestinal, liver, and pancreatic diseases in the United States: update 2021. Gastroenterology, 162(2), 621-644.

4. Radlinski, M. J., Strand, D. S., & Shami, V. M. (2023). Evolution of interventional endoscopic ultrasound. Gastroenterology Report, 11, goad038.

5. Hassona, Y., Taimeh, D., Marahleh, A., & Scully, C. (2016). YouTube as a source of information on mouth (oral) cancer. *Oral diseases*, *22*(3), 202-208.

6. Hegarty, E., Campbell, C., Grammatopoulos, E., DiBiase, A. T., Sherriff, M., & Cobourne, M. T. (2017). YouTube™ as an information resource for orthognathic surgery. Journal of orthodontics, 44(2), 90-96.

7. YouTube for Press. 2019. Available at: https://www.youtube.com/about/press/ [access date November 24, 2019].

8. Chen, Z., Zhu, H., Zhao, W., Guo, H., Zhou, C., Shen, J., & Ye, M. (2019). Estimating the quality of YouTube videos on pulmonary lobectomy. Journal of thoracic disease, 11(9), 4000.

9. Desai, T., Shariff, A., Dhingra, V., Minhas, D., Eure, M., & Kats, M. (2013). Is content really king? An objective analysis of the public's response to medical videos on YouTube. PLOS one, 8(12), e82469.

10. Radadiya, D., Gonzalez-Estrada, A., Lira-Vera, J. E., Lizarrga-Torres, K., Mahapatra, S. S., Murguia-Fuentes, R., ... & Devani, K. (2020). Colonoscopy videos on YouTube: Are they a good source of patient education?. Endoscopy International Open, 8(05), E598-E606.

11. So, Hoonsub et al. "YouTube as a source of information on endoscopic retrograde cholangiopancreatography." Medicine vol. 101,38 (2022): e30724.

12. Bernard, A., Langille, M., Hughes, S., Rose, C., Leddin, D., & Van Zanten, S. V. (2007). A systematic review of patient inflammatory bowel disease information resources on the World Wide Web. Official journal of the American College of Gastroenterology| ACG, 102(9), 2070-2077.

13. Fabbri, Carlo et al. "Endoscopic ultrasound-guided treatments: are we getting evidence based--a systematic review." World journal of gastroenterology vol. 20,26 (2014): 8424-48.

14. Sampson M, Cumber J, Li C, et al.. A systematic review of methods for studying consumer health YouTube videos, with implications for systematic reviews. PeerJ. 2013;1:e147.

15. Briones R, Nan X, Madden K, et al.. When vaccines go viral: an analysis of HPV vaccine coverage on YouTube. Health Commun. 2012;27:478–85.