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Research Article

YouTube as an information source of Transversus abdominis plane block

Transversus abdominis plan bloğu hakkında bir bilgi kaynağı olarak YouTube

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Abstract

Aim: The YouTube video platform has recently been used by doctors as a source of information. Many studies have evaluated the quality of YouTube videos. Our aim is to review the quality of transfers andominis plane block videos available on YouTube

Material and Methods: Searched the term "Transversus abdominis plane block" on YouTube portal on 20.03.2023. The 50 most clicked videos were included in the study. By two different independent observers; Video durations; number of clicks, likes, dislikes, comments; and publication dates noted. In addition, video contents were reviewed. Video Power Index (VPI) was calculated. Videos were analyzed according to video quality, DISCERN, JAMA (Journal of the American Medical Association), global quality scale (GQS), AND modified DISCERN scores.

Results: The mean DISCERN VALUES of the videos were 59.51 ± 10.53, JAMA scores were 2.8 ± 1.08, GQS scores were 3.54 ± 1.34, and modified DISCERN scores were 3.38 ± 1.24. All videos were "good" according to DISCERN. According to the DISCERN scoring system, 19 videos were excellent, 17 were good, 12 were average, and 2 were poor.

Conclusion: The quality of the TAP block related videos on Youtube was quite adequate. The uploaded videos were considered both informative in terms of literature and videos that could be watched in practice.

Keywords: YouTube, TAP block, quality, DISCERN, JAMA, GQS

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Öz

Amaç: YouTube video platformu son zamanlarda doktorlar tarafından bilgi kaynağı olarak kullanılmaya başlandı. Birçok çalışma, YouTube videolarının kalitesini değerlendirmiştir. Amacımız, YouTube'da bulunan transfer andominis uçak bloğu videolarının kalitesini incelemektir.

Gereç ve Yöntemler: 20.03.2023 tarihinde YouTube portalında "Transversus abdominis plan bloğu" terimini arattı. En çok tıklanan 50 video çalışmaya dahil edildi. İki farklı bağımsız gözlemci tarafından; Video süreleri; tıklama, beğeni, beğenmeme, yorum sayısı; ve yayın tarihleri not edilmiştir. Ayrıca video içerikleri incelendi. Video Güç İndeksi (VPI) hesaplandı. Videolar, video kalitesi, DISCERN, JAMA (Journal of the American Medical Association), küresel kalite ölçeği (GQS), AND modifiye DISCERN puanlarına göre analiz edildi.

Bulgular: Videoların ortalama DISCERN DEĞERLERİ 59,51 ± 10,53, JAMA puanları 2,8 ± 1,08, GQS puanları 3,54 ± 1,34 ve modifiye DISCERN puanları 3,38 ± 1,24 idi. DISCERN'e göre tüm videolar "iyi" idi. DISCERN puanlama sistemine göre 19 video mükemmel, 17 iyi, 12 ortalama ve 2 video kötüydü.

Sonuç: Youtube'daki TAP bloğu ile ilgili videoların kalitesi oldukça yeterliydi. Yüklenen videolar hem literatür açısından bilgilendirici hem de uygulamalı olarak izlenebilecek videolar olarak değerlendirilmiştir.

Anahtar Kelimeler: YouTube, TAP bloğu, kalite, DISCERN, JAMA, GQS

Introduction

YouTube is an online video-sharing platform that reaches billions of users every day. Recently, the number of users and viewers has been increasing as a result of the easy accessibility of social media and the development of internet infrastructure [1]. Several studies have shown that patients and healthcare professionals use the videos uploaded to the Youtube platform as a source of knowledge [2,3].

Recently, uploading videos to the Youtube platform and generating revenue based on the number of views has become a new business model. For this reason, videos are uploaded to increase click-through and view rates rather than the authenticity of the videos [4]. This led to the idea that the quality of the videos should be questioned. Health-related videos are important in this context. According to a study, YouTube has the potential to serve as a resource for young people looking for health information. This study has determined that information published by healthcare professionals can promote learning and improve knowledge [5].

Both specialists and patients actively use social media as a source of information. Since a very large number of videos related to each topic have been shared, many studies in the field of health are investigating YouTube video quality [6-8].

The transversus abdominis plane (TAP) block, one of the abdominal site blocks, was first described by Rafi in 2001 [9]. Then, in 2007, Hebbart et al [10] stated for the first time that ultrasound-assisted TAP block can be applied more effectively and safely. It is noticeable that it has been used in many indications in the literature until today, especially with the spread of applications with the help of USG. Because it is an interventional procedure, it is normal for health workers to try to access videos related to TAP block.

Our aim in this study is to investigate the quality of TAP block-related videos objectively. It started from the idea that the TAP block application, which is frequently used today, can contribute to education by watching Youtube videos.

Material and Methods

On March 20, 2023, a search was made by typing “Transversus abdominis plane block” into the search bar of the Youtube online platform. The results were sorted by the number of views. Only videos uploaded by health professionals were evaluated. Duplicate videos, videos other than those uploaded by health professionals, videos containing ads, non-English videos, and videos shorter than 1 minute were excluded from the study. Two independent auditors reviewed the videos. As an explanatory feature, the structure of the videos, the number of views, the upload date, the number of likes, the number of dislikes, and the comments under the video were recorded.

Videos were analyzed according to DISCERN, JAMA (Journal of the American Medical Association), global quality scale (GQS), AND modified DISCERN scores.

The DISCERN scoring system consists of 16 questions and

is examined in 2 separate sections [11]. The questions are divided into two sections: the first section is about security, and the second section is about video quality [8]. Answers to the sixteenth question are provided for overall review (Table 1). According to the videos score; 16-26 points: poor quality, 27-38 points: low quality, 39-50 points: average quality, 51-62 points: good quality, higher scores are rated as excellent quality.

Table 1. DISCERN Scoring System

Section	Questions	No	Partly			Yes
Reliability	1.Explicit aims	1	2	3	4	5
	2.Aims achieved	1	2	3	4	5
	3.Relevance to patients	1	2	3	4	5
	4. Source of information	1	2	3	4	5
	5.Currency (date) of information	1	2	3	4	5
	6. Bias and balance	1	2	3	4	5
	7. Additional sources of information	1	2	3	4	5
	8. Reference to areas of uncertainty	1	2	3	4	5
Quality	9. How treatment works	1	2	3	4	5
	10. Benefits of treatment	1	2	3	4	5
	11. Risks of treatment	1	2	3	4	5
	12. No treatment options	1	2	3	4	5
	13. Quality of life	1	2	3	4	5
	14. Other treatment options	1	2	3	4	5
	15. Shared decision making	1	2	3	4	5
16. Based on the answers to all of these questions, rate the overall quality of the publication as a source of information about treatment choices		1	2	3	4	5

In addition, the video quality was evaluated with a QRS Score. A 5-point scoring system was used for the overall quality of the videos (Table 2).

Table 2. Global Quality Scale Criteria

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

The JAMA scoring system is an evaluation method that includes description, validity, qualification, and authorship to examine the quality of information. Each question receives 0 or 1 point, which is noted as a maximum of 4 points (Table 3).

Table 3. Journal of the American Medical Association scoring system

Authorship	Authors and contributors, their affiliations, and relevant credentials should be provided
Attribution	References and sources for all content should be listed clearly, and all relevant copyright information should be noted
Disclosure	Website "ownership" should be prominently and fully disclosed, as should any sponsorship, advertising, underwriting, commercial funding arrangements or support, or potential conflicts of interest
Currency	Dates when content was posted and updated should be indicated

Singh et al [12] also used the modified DISCERN scoring system, in which they simplified the DISCERN scoring system. It examines the reliability, openness, bias, referencing, and information uncertainty in this scoring system (Table 4).

Table 4. Modified discern scoring system

1. Are the aims clear and achieved?
2. Are reliable sources of information used? (i.e., publication cited, speaker is board-certified general surgeon)
3. Is the information presented balanced and unbiased?
4. Are additional sources of information listed for patient reference?
5. Are areas of uncertainty mentioned?
*1 point for every "Yes," 0 points for "No"

The Video Power Index (VPI) was used for the popularity of the videos. The VPI score was calculated using the following: (number of likes/ dislikes + number of likes) X 100.

Since there will be a difference in the number of views depending on the uploaded year, the viewing rate of a video on Youtube has been calculated based on the total views/time since uploading for an objective assessment.

Video content was grouped into Presentation/Application videos, video length (over and under 3 minutes), release date [<5 years (new videos) and >5 years (old videos), the first 25 videos and the second 25 videos according to the number of views, the daily number of views (<10 or >10), VPI (<95 or >95). Each group and the video quality were evaluated separately.

SPSS for Mac 26.0 was used to perform statistical analysis(IBM SPSS for Mac, Version 26.0; IBM Corp). The statistical significance level was set as 0.05. Descriptive data were given as mean and standard deviation. The coefficient was calculated to evaluate the relationship between Pearson correlation and Deceleration. Due to the abnormal distribution of the parameters, the Mann-Whitney test was used to compare the Kruskal-Wallis groups. The U-test to determine the group (with Bonferroni's correction) caused this difference. The differences between the groups were compared using one-way ANOVA test.

Ethics committee approval was not required in this study. The study was carried out as the Declaration of Helsinki Principles.

Results

"Transversus abdominis plane block" was entered into the Youtube search bar. Then, the videos were sorted according to the number of views from the filtering section. 180 videos were found, of which 100 and above have been viewed. When the first 50 of these videos were examined, 2 of them were excluded from the study because they were not in English, 3 of them were irrelevant content, and 2 videos were under 1 minute.

The total number of views of the videos was 1,604,400. The least-watched video was watched 2,700 times and the most-watched video was watched 261,000 times (32,088 ± 54,954.31). The average video length was 287.16 ± 258.4. Other descriptive statistics are shown in Table 5.

Table 5. Data of YouTube™ videos

	n	Mean ± Std	Min-Max
Video length (sec)	**50**	287.16 ± 258.4	60-1366
View count	**50**	32088.88 ± 54954.31	2700-261000
View count Daily	**50**	21.48 ± 41.7	1.25-232.87
Like	**50**	177.48 ± 287.57	0-1200
Dislike	**50**	6.98 ± 12.52	0-65
Comment/year	**50**	2.82 ± 8.46	0-4700
VPI	**50**	94.29 ± 80.72	60-100
DISCERN	**50**	59.51 ± 10.53	34-76
JAMA	**50**	2.8 ± 1.08	1--4
GQS	**50**	3.54 ± 1.34	1--5
MODIFIED DISCERN	**50**	3. 38 ± 1. 24	1--5

Sec: Second; n: number of videos; Std: Standard deviation; Min: Minimum; Max: Maximum; VPI: Video Power Index; JAMA: Journal of the American Medical Association; GQS: global quality scale.

The mean DISCERN score of the videos was 59.51 ± 10.53, JAMA scores were 2.8 ± 1.08, GQS scores were 3.54 ± 1.34, and modified DISCERN scores were 3. 38 ± 1.24. According to the DISCERN scoring system, 19 videos were excellent, 17 good, 12 average, 2 poor.

The videos were examined in 2 groups presentation videos and application videos. While 23 (45.1%) videos were uploaded as presentations, the number of application videos was 27 (52.9%).

In multiple regression analysis, only the VPI value showed a positive correlation with DISCERN, JAMA, GQS, and modified DISCERN scores ($p<0.05$, R Square: 0.51). The correlation analysis between scoring systems is shown in Table 6.

Table 6. Correlation Between quality scores

	DISCERN	JAMA	GQS	Modified DISCERN
DISCERN	**1**	0.524	0.518	0.413
JAMA	**0.524**	1	0.871	0.615
GQS	**0.518**	0.871	1	0.803
Modified DISCERN	**0.413**	0.615	0.803	1

JAMA: Journal of the American Medical Association; GQS: global quality scale.

When 6 different parameters were examined in themselves, it was found that only daily viewing affected JAMA and GQS scores, video quality increased as daily viewing increased, and JAMA scores of old videos were significantly lower (Table 7).

Table 7. Relationship between six categoric variables and videos quality

	n	DISCERN (std dev)	p value	JAMA (std dev)	p value	GQS (std dev)	p value	ModifiyeDis-cern (std dev)	p value
Video source									
Presentation	23	59.26 ± 10.51	0.798	2.83 ± 1.02	0.574	3.35 ± 1.30	0.918	3.22 ± 1. 24	0.946
Application	27	59.74 ± 10.74		2.78 ± 1.15		3.37 ± 1.38		3.52 ± 1.25	
Old videos(>5 years)	25	59.52 ± 10.63	0.544	2.52 ± 1.19	0.016	3.24 ± 1.48	0.39	3.16 ± 1.28	0.837
New videos (≤5 years)	25	59.52 ± 10.65		3.08 ± 0.9		3.84 ± 1.14		3.60 ± 1.19	
View count first 25	25	61.88 ± 9.78	0.353	2.92 ± 0.95	0.69	3.52 ± 1.19	0.166	3.24 ± 1.05	0.124
View count second 25	25	57.16 ± 10.92		2.68 ± 1.21		3.56 ± 1.5		3.52 ± 1.41	
View count daily (>10)	23	61.70 ± 57.67	0.934	3.17 ± 0.77	0.01	4.04 ± 0.97	0.003	3.74 ± 0.96	0.077
View count daily (≤10)	27	57.67 ± 10.29		2.48 ± 1.22		3.11 ± 1.47		3.07 ± 1.38	
Video length(>3 minutes)	22	59.45 ± 12.08	0.305	2.77 ± 1.02	0.47	3.59 ± 1.22	0.25	3.36 ± 1.17	0.678
Video lenght(≤3 minutes)	28	59.57 ± 9.379		2.82 ± 1.02		3.50 ± 1.45		3.39 ± 1.13	
VPI (≤95)	19	53.58 ± 10.75	0.222	1.74 ± 0.8	0.131	2.11 ± 0.875	0.335	2.47 ± 1.1	0.069
VPI (>95)	31	63 ± 8.88		3.45 ± 0.62		4.42 ± 0.60		3.94 ± 0.92	

Discussion

In this study, we objectively examined the quality of the videos shared on the Youtube video platform related to the TAP block application, which is frequently used in anesthesiology and reanimation clinics. The quality of this video-sharing platform, which is often followed by doctors, is important. Many studies conducted examine the quality of the new generation video sharing platform [6,13-15]. Evaluation scoring systems such as DISCERN, JAMA, and GQS are not planned for youtube videos. However, it has been used frequently in recent studies [8].

The main goal in postoperative pain management is to keep drug doses as low as possible to reduce side effects. TAP is a relatively new regional anesthesia technique that provides analgesia to the parietal peritoneum and lower abdominal wall muscles in various abdominal surgeries and can form part of a multimodal analgesic approach [16]. The anterior abdominal wall is innervated by sensory afferent nerve branches of the lower six thoracic and upper lumbar nerves, which are the therapeutic focus of local anesthetic to provide analgesia for the abdominal surgical incision [17]. Rafi et al. [9] perhaps the most popular development after the classical application recipe is the use of ultrasound guidance to improve the accuracy of the local anesthetic in the correct plane. This method also made it possible to reduce complications and achieve more successful results [18,19].

Our study is not the first study to examine the quality of the Youtube platform. But it is the first study to examine the quality of the TAP block application in youtube videos, which should be followed visually.

Most studies have argued that the quality of videos on Youtube is poor [8,20,21]. Some studies have even concluded that videos may be more harmful than beneficial [20]. It is included in many reports that videos uploaded by health professionals or academic institutions are of higher quality than videos uploaded by individuals, and these videos may be useful for patients to watch [22]. In our study, similarly, the videos of health professionals were evaluated and quality videos were obtained. Considering that many videos are uploaded for educational purposes and not for patient information purposes, strict adherence to the appropriate guidelines will be useful in terms of improving the quality of these videos.

Since the TAP block is considered an interventional procedure, we found that the procedures performed were of high quality in showing anatomical points. However, the information before the procedure was more detailed in the videos prepared in the form of a presentation of the possible procedure sequence and post-procedure complications. The fact that high-quality videos come across as too much in this area may be due to the specificity of the topic and the clickbait excuse may not be made by extra users.

There were some limitations of our study. First of all, the videos were not watched much because the topic was very specific and aimed at health professionals. In addition, there is currently no scoring system to fully reflect the educational quality of the videos. We have included only English videos and have not included videos in other languages.

Conclusion

As a result, the quality of the TAP block videos we watched and objectively evaluated was quite good. TAP block videos on Youtube can be watched because of its contribution to practical and visual memory. But it should not be forgotten that these videos should be used as an aid, not as a source.

Conflict of Interest

all authors confirmed that there is no conflict of interest

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