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Youtube as a Source of Information on Silver Diamine Fluoride

Gümüş Diamin Florür Hakkında Bilgi Kaynağı Olarak Youtube

ABSTRACT

Objectives

In recent years, the use of video-sharing platforms for obtaining information on dental procedures has increased significantly. The aim of this study was to evaluate the content of Youtube videos about silver diamine fluoride (SDF), a recently popular dental procedure.

Material and Methods

Youtube was searched using the term "*silver diamine fluoride*", and the first 140 videos displayed were analyzed. Based on the inclusion criteria, 60 videos were included in the study. Two observers scored the videos using the Global Quality Scale (GQS), usefulness and the Journal of American Medical Association (JAMA) criteria. The relationship between the source and purpose of the videos and the parameters was analyzed, and the correlation between the scores was analyzed.

Results

Regarding the uploader source of the videos, 13.3% were from universities or professional organizations, 33.3% were from healthcare professionals, 40% were from health information pages, and 13.3% were from others. Regarding their purpose, 41.7% were technical, and 58.3% were informative. The mean GQS, usefulness and JAMA scores for the videos were 2.76 ± 1.13 , 3.95 ± 1.85 , and 2.18 ± 0.72 , respectively. There were statistically significant differences in the GQS, usefulness, and JAMA scores for the videos between categories according to both uploader sources and purposes ($P < 0.01$). GQS, usefulness and JAMA scores showed statistically significant correlations in comparison with each other ($P < 0.001$).

Conclusion

Youtube can serve as a valuable educational tool for patients seeking information on dental treatments, including the application of SDF. Health professionals should be encouraged to upload SDF-related videos with comprehensive information to educate and properly guide patients.

Key Words

Silver diamine fluoride, Video analysis, Youtube

ÖZ

Amaç

Son yıllarda, diş hekimliği uygulamaları hakkında bilgi edinmek için video paylaşım platformlarının kullanımı önemli ölçüde artmıştır. Bu çalışmanın amacı, popüler bir diş hekimliği uygulaması olan gümüş diamin florür (SDF) hakkındaki Youtube videolarının içeriğini değerlendirmektir.

Gereç ve Yöntemler

Youtube'da "gümüş diamin florür" terimi kullanılarak arama yapılmış ve görüntülenen ilk 140 video analiz edilmiştir. Belirlenen dahil edilme kriterleri doğrultusunda 60 video çalışmaya alınmıştır. İki bağımsız gözlemci; videoları Global Kalite Ölçeği (GQS), yararlılık skoru ve Amerikan Tıp Birliği Dergisi (JAMA) kriterlerini kullanarak puanlamıştır. Videoların kaynağı ve amacı ile bu parametreler arasındaki ilişki analiz edilmiş ve puanlar arasındaki korelasyon incelenmiştir.

Bulgular

Videoların yüklenme kaynaklarına bakıldığında; %13.3'ünün üniversiteler veya meslek kuruluşlarından, %33.3'ünün sağlık profesyonellerinden, %40'ının sağlık bilgilendirme sayfalarından ve %13.3'ünün diğer kaynaklardan oluştuğu görülmüştür. Videoların amaçlarına göre ise %41.7'sinin teknik, %58.3'ünün bilgilendirici nitelikte olduğu belirlenmiştir. Videoların GQS, yararlılık ve JAMA puanları sırasıyla 2.76 ± 1.13 , 3.95 ± 1.85 ve 2.18 ± 0.72 olarak hesaplanmıştır. Hem yükleme kaynaklarına hem de video amaçlarına göre kategoriler arasında ortalama GQS, yararlılık ve JAMA puanları açısından istatistiksel olarak anlamlı farklılıklar bulunmuştur ($P < 0.001$). GQS, yararlılık ve JAMA puanları kendi aralarında karşılaştırıldığında istatistiksel olarak anlamlı korelasyonlar saptanmıştır ($P < 0.001$).

Sonuç

Youtube, SDF uygulaması da dahil olmak üzere diş tedavileri hakkında bilgi arayan hastalar için değerli bir eğitim aracı olarak hizmet edebilir. Sağlık profesyonelleri, hastaları eğitmek ve doğru şekilde yönlendirmek amacıyla kapsamlı bilgiler içeren SDF ile ilgili videolar yüklemeye teşvik edilmelidir.

Anahtar Sözcükler

Gümüş diamin florür, Video analizi, Youtube

INTRODUCTION

Dental caries remains the most common chronic disease among children globally, and its special type, early childhood caries (ECC), refers to the condition wherein an infant or child aged 71 months or under exhibits one or more tooth surfaces that are decaying, missing (as a result of caries), or filled in their primary teeth. It is a major healthcare risk, especially for people with disadvantages and lower socio-economic status (1,2). The traditional method of treating ECC entails the removal of all affected demineralized dental tissue and then the placement of a dental filling to restore the affected tooth's functionality and aesthetic properties (3). However, managing ECC with conventional restorative methods incurs significant costs, requires significant amounts of time and the expertise of skilled dentists, which alone is not enough to combat this common disease, especially in disadvantaged communities or developing countries where dental equipment and manpower are not readily available. To prevent the potentially serious consequences of untreated caries from ECC, it is important to identify an effective, cost-efficient method of caries treatment, especially in younger children who are at high risk of caries and have restricted access to dental care (4).

Silver diamine fluoride (SDF) is an anti-caries agent with ease of use and low material cost that successfully arrests the progression of dental caries and has the potential to help manage untreated carious lesions in young children (5). SDF is an alkaline and discolored solution that contains fluoride and silver ions and can be applied topically in the non-restorative treatment of caries. The caries-arresting activity of SDF is adequate, mostly because of the synergistic effects resulting from the presence of silver, which functions as an antibacterial agent, and fluoride, which facilitates the process of remineralization (6). Systematic reviews analyzing the results of clinical trials found that 38% of SDF solution with 44.800 ppm fluoride was sufficient in preventing the progression of ECC-induced lesions (7,8). The efficacy of SDF in the prevention of dental caries in permanent teeth has also been demonstrated (9). The clinical application of SDF is simple, non-invasive, painless, cost-effective, and aerosol-free treatment. It can also be applied in the case of children who have a fear of dentists or who are too young to undergo conventional restorative treatment (10).

The most important disadvantage of SDF is the black staining of caries lesions following application. When SDF is applied to the tooth surface, it prevents the progression of caries by forming a hard, black-colored, impermeable layer on the tooth surface, and the darker this coloration is, the more likely it is that the decay has stopped (11). Despite the higher clinical efficacy of SDF compared to alternative approaches in preventing caries progression (12), the resulting black stain affects the acceptability of SDF treatment by patients and/or their parents (13). American Association of Pediatric Dentistry (AAPD) guidelines, reported that in the light of the available evidence, the advantages of SDF

outweigh the negative effects such as discoloration and the use of SDF in the management of dental caries in young patients, including children and individuals requiring special care (14).

The use of the internet is increasing as an easily available information provider and has become a preferred resource of health information for the general population (15). One of the most favored websites for patients looking to access medical information is the video-streaming website Youtube, which ranks as the third "most visited" website in the world (16). Videos are freely accessible on a variety of media platforms, including personal computers, tablets, smartphones, and televisions. Videos can be uploaded by any person or organization (17). However, Youtube is frequently subjective and can both benefit users and lead to them receiving misleading data (18). Previous studies (19-21) that assessed Youtube content about different diseases revealed that the information in the videos was not uniform and raised concerns about the accuracy and dependability of the information provided. With this, there are a limited number of studies analyzing the information quality of Youtube video content on topics of interest to patients and parents about SDF applications, which have become popular in pediatric dentistry (22-25). Therefore, the purpose of this study was to assess the content quality and usefulness of popular Youtube videos about the SDF procedure. By utilizing a specialized usefulness scoring system based on AAPD guidelines alongside standard metrics, this study aims to expand on previous research and offer practical insights for dental professionals to guide parents in finding accurate online information.

MATERIAL and METHODS

The most searched words on the internet were researched using Google Trends, and it was determined that the most searched term on the subject in the last 5-year worldwide was "silver diamine fluoride". A newly created Youtube account was used to ensure that old searches would not affect the current search results and listings, and the browser's history was cleared before the search. Videos uploaded up to 21 August 2023 related to SDF were monitored using

this account, sorted by relevance without changing Youtube default settings and applying filters. It is reported that more than 90% of internet search engine users click on a result within the first 3 pages of search results (26). In this study, the first 140 videos generated as a result of a search with the search term "silver diamine fluoride" were selected. The ethics committee's approval was not required in the study as only publicly available data were planned to be used.

Videos in the English language and related to the topic were included in the study. Videos in languages other than English, repeated videos, videos not related to the topic, videos with distorted images or sound, and videos longer than 15 minutes were excluded. Considering the inclusion and exclusion criteria, it was determined to include 60 of the analyzed videos in the study.

Since the order in which videos were listed might have changed in searches performed at different times, the uniform resource locators (URLs) of the videos were saved to avoid losing video data after the search result. The source of the videos was classified as university or professional organizations, healthcare professionals, health information pages, and others (TV, Media, News, Commercial). Video purposes were categorized as informative and technical. The view count, duration (min), number of days since upload, and number of likes, and comments were recorded for each video. The number of dislikes was recorded as '0' for all videos because Youtube has restricted the public display of dislike counts since 2021. Interaction index (%) ($[(\text{number of likes} - \text{number of dislikes}) / \text{view count}] * 100$) and view ratio (%) ($(\text{view count} / \text{number of days since upload}) * 100$) were calculated using the data of the videos (19).

Two pediatric dentistry specialists (H.A. and K.S.) independently evaluated the video contents and characteristics. The selected videos were scored in terms of their content according to the Global Quality Scale (GQS), usefulness and the Journal of American Medical Association (JAMA) criteria. GQS is a 5-point scale and was used to represent the overall quality of the videos (Tab. 1) (27).

Table 1. Global Quality Scale (GQS) criteria.

Score	Description
1	Poor quality, poor flow of the video, 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 flow, very useful for patients

The criteria for calculating the usefulness score were developed based on the AAPD guideline (14) and previous studies (28,29). Videos were evaluated in terms of 8 topics presented in Table 2 to determine the usefulness score, and for each topic, a score of 1 was given if the relevant topic was mentioned and 0 if it was not.

The JAMA Benchmarking Criteria were used to evaluate the accuracy, utility and reliability of the videos. For JAMA scoring, 1 point was given for each criterion present in the video out of the 4 criteria shown in Table 3, and the JAMA score of a video could range from 0 to 4. The mean GQS, usefulness, and JAMA scores were calculated as the mean of the individual GQS, usefulness, and JAMA scores of the observers.

Table 2. Usefulness score components.

Items	Score
Definition of SDF	1
Procedure of application	1
Indications	1
Contraindications	1
Advantages	1
Safety and possible side effects	1
Application interval	1
Cost	1
Total	8

Table 3. The Journal of American Medical Association (JAMA) scoring system.

JAMA 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 noted.
Disclosure	Web site "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 that content was posted and updated should be indicated.

Table 4. Descriptive analysis of the videos.

Parameters	Minimum	Maximum	Mean \pm SD	Median
View count (n)	18	450740	17781.58 \pm 60720.23	1949
Duration (min)	0.85	13.53	4.12 \pm 3.16	2.95
Likes (n)	0	1400	88.90 \pm 216.33	23.5
Dislikes (n)	0	0	0 \pm 0	0
Comments (n)	0	197	9.22 \pm 27.11	1
Interaction index	0	9.57	1.14 \pm 1.53	0.66
Days since upload	1	2619	1408.63 \pm 755.18	1402
View ratio	1.77	45400	1766.67 \pm 6332.57	392.49
GQS score	1	5	2.76 \pm 1.13	3
Usefulness score	1	8	3.95 \pm 1.85	4
JAMA score	1	4	2.18 \pm 0.72	2

SD: Standard deviation

Statistical analysis

The data obtained were analyzed using SPSS version 23 (IBM; Armonk, NY, USA) software program. Descriptive statistics were made for the parameters of the videos, and minimum, maximum, mean and median values were determined. The normality of the variables was analyzed with the Shapiro-Wilk test. Since the data were not normally distributed, the Kruskal-Wallis test was used to evaluate the relationship between the source of the videos and the purpose of the videos with the parameters. Mann-Whitney U analysis was performed between the two groups to analyze which groups were significantly different. The correlation of GQS, usefulness and JAMA scores between each other

were analyzed using Spearman correlation analysis. The inter-rater reliability for the GQS, usefulness and JAMA scores was evaluated using the Intraclass Correlation Coefficient (ICC) based on a two-way mixed-effects model and absolute agreement. The level of significance was $P < 0.05$.

RESULTS

When the videos were categorized by uploader source, 13.3% ($n = 8$) were from universities or professional organizations, 33.3% ($n = 20$) were from healthcare professionals, 40% ($n = 24$) were from health information pages, and 13.3% ($n = 8$) were from others (TV, Media, News, Commercial). Regarding the purposes of the videos, 58.3% ($n =$

35) were informative, and 41.7% ($n = 25$) were technical. Descriptive variables were presented in Table 4 regarding the number of views (17781.58 ± 60720.23), duration (4.12 ± 3.16 min), number of likes (88.90 ± 216.33), number of dislikes (0 ± 0), number of comments (9.22 ± 27.11), interaction index (1.14 ± 1.53), number of days since upload (1408.63 ± 755.18), view ratio (1766.67 ± 6332.57), GQS score (2.76 ± 1.13), usefulness score (3.95 ± 1.85) and JAMA score (2.18 ± 0.72) reported.

The analysis of parameters according to video uploader sources was shown in Table 5, and there were statistically significant differences between uploader sources for view count ($p = 0.014$), likes ($p = 0.020$), days since upload ($p = 0.039$), view ratio ($p = 0.033$), GQS score ($p = 0.002$), usefulness score ($p = 0.004$) and JAMA scores ($p = 0.001$). Data on the analysis of the parameters according to the purpose of the videos were shown in Table 6.

Table 5. Analysis of parameters by video uploader sources (Mean \pm standard deviation).

Parameters	University or professional organizations (n=8)	Healthcare professionals (n=20)	Health information pages (n=24)	Others (TV, Media, News, Commercial) (n=8)	p*
View count (n)	29646.25 \pm 48530.84 ^a	4048.05 \pm 9359.65 ^b	29043.92 \pm 90871.29 ^a	6463.75 \pm 8339.64 ^{ab}	0.014
Duration (min)	6.54 \pm 3.42	3.38 \pm 2.64	3.68 \pm 2.79	4.86 \pm 4.32	0.078
Likes (n)	194.88 \pm 306.10 ^a	32.30 \pm 64.49 ^b	115.96 \pm 281.14 ^a	43.25 \pm 53.56 ^{ab}	0.020
Comments (n)	2.00 \pm 3.16	3.55 \pm 7.09	17.21 \pm 40.95	6.62 \pm 12.66	0.214
Interaction index	0.72 \pm 0.33	1.14 \pm 1.10	1.49 \pm 2.14	0.50 \pm 0.36	0.503
Days since upload	1309.75 \pm 340.90 ^a	1077.05 \pm 721.12 ^a	1529.50 \pm 840.44 ^{ab}	1973.88 \pm 466.66 ^b	0.039
View ratio	1951.76 \pm 2708.38 ^a	362.18 \pm 584.32 ^b	3352.50 \pm 9759.63 ^a	335.26 \pm 361.82 ^{ab}	0.033
GQS score	3.75 \pm 1.28 ^a	2.98 \pm 0.94 ^a	2.13 \pm 0.99 ^b	3.13 \pm 0.83 ^a	0.002
Usefulness score	5.44 \pm 2.06 ^a	4.25 \pm 1.62 ^a	2.96 \pm 1.65 ^b	4.69 \pm 1.28 ^a	0.004
JAMA score	2.63 \pm 0.92 ^a	2.03 \pm 0.47 ^b	1.88 \pm 0.54 ^b	3.00 \pm 0.76 ^a	0.001

* Kruskal-Wallis Test; different superscript letters indicate statistically significant differences between the values in the same row ($p < 0.05$).

Table 6. Analysis of parameters by the purpose of the videos (Mean \pm standard deviation).

Parameters	Informative (n = 35)	Technical (n = 25)	p*
View count (n)	3476.80 \pm 5619.07	37808.28 \pm 91119.81	0.000
Duration (min)	4.88 \pm 3.66	3.05 \pm 1.91	0.115
Likes (n)	29.49 \pm 43.63	172.08 \pm 316.22	0.000
Comments (n)	3.20 \pm 7.17	17.64 \pm 40.09	0.071
Interaction index	1.02 \pm 0.98	1.31 \pm 2.08	0.857
Days since upload	1311.97 \pm 702.30	1543.96 \pm 818.88	0.239
View ratio	292.08 \pm 419.22	3831.08 \pm 9524.88	0.000
GQS score	3.33 \pm 0.89	1.96 \pm 0.93	0.000
Usefulness score	4.90 \pm 1.44	2.62 \pm 1.51	0.000
JAMA score	2.44 \pm 0.69	1.80 \pm 0.58	0.001

* Mann-Whitney U Test.

The mean number of views (37808.28 ± 91119.81), likes (172.08 ± 316.22), and view ratios (3831.08 ± 9524.88) of technical videos were statistically significantly higher than the mean number of views (3476.80 ± 5619.07), likes (29.49 ± 43.63), and view ratios (292.08 ± 419.22) of informative videos, while the mean GQS (3.33 ± 0.89), usefulness (4.90 ± 1.44), and JAMA scores (2.44 ± 0.69) of informative videos were statistically significantly higher than the mean GQS (1.96 ± 0.93), usefulness (2.62 ± 1.51),

and JAMA scores (1.80 ± 0.58) of technical videos. GQS, usefulness and JAMA scores showed statistically significant correlations in comparison with each other (Tab. 7) ($P < 0.001$). The inter-rater reliability was excellent across all evaluated metrics, with ICCs of 0.955 (95% CI: 0.925–0.973) for the GQS, 0.966 (95% CI: 0.945–0.980) for usefulness, and 0.922 (95% CI: 0.874–0.953) for the JAMA score.

Table 7. Correlation between GQS score, Usefulness score, and JAMA score.

Parameters		GQS Score	Usefulness Score	JAMA Score
GQS score	r		0.944	0.518
	P		<0.001	<0.001
Usefulness score	r	0.944		0.510
	p	<0.001		<0.001
JAMA score	r	0.518	0.510	
	p	<0.001	<0.001	

* Spearman correlation analysis, r: Spearman's rho.

DISCUSSION

Depending on the advances in technology, the internet has become an important tool for individuals to search for information on various health-related issues (30). The rate of individual internet use for researching health-related information is above 80% (31). Youtube is a widely used online video-sharing platform for learning about any topic and contains a large number of videos on different health-related topics (20). The present study evaluated the level of quality and content of SDF application-related Youtube videos. In the literature, there are numerous studies about the topics covered in Youtube videos about different aspects of dentistry, including oral habits, early childhood caries, and dental trauma (32–34). However, a few studies (22–25) have been found to examine the quality and content of the information contained in the videos about the SDF procedure on Youtube.

The topical application of SDF and its proven caries arresting efficacy have rapidly increased the interest of both dentists and patients in this material in recent years (35). For this reason, patients' need for additional information and research curiosity about interesting topics such as SDF applications in dentistry directs individuals to use the internet in addition to obtaining information from their physicians (36). However, the fact that the videos shared on the Youtube video platform are not standardized in terms of content, that the videos can be easily uploaded to the platform without being subject to control, and that some videos contain misleading or deceptive information on the subject leads to questioning of the video contents (37). As the reliability of the information provided by videos on the Youtube platform is uncertain, there are potential risks associated with false and misleading content that may adversely affect patients seeking reliable information (38).

The results of this study showed that the video content available on Youtube about SDF needs to be improved so that it can be used as an adequate source of information for patients. This is consistent with previous studies (33,34,39) that found that video content on Youtube on different topics related to pediatric dentistry is not a sufficient source of information for patients or parents. On the other hand, among the videos analyzed, the video content created by the university or professional organization has the highest average score in terms of quality and usefulness evaluation. Consistent with the current results of the study, in previous studies (19,40,41) evaluating the content of Youtube videos on different topics in dentistry, videos created by a university or professional organization showed higher levels of usefulness and video quality.

The average duration of video content with higher quality and usefulness scores was found to be longer in this study. Previous studies (34,39) have shown that videos with higher quality content have longer duration, and this is consistent with the results of this study. When the analyzed videos were categorized by upload source, health information pages had the highest proportion of 40%, while videos created by university or professional organization accounted for only 13.3%. Although a relatively small proportion of all SDF-related videos found on Youtube were uploaded by university or professional organization, these videos had the highest average usefulness and GQS scores for content. Chauhan *et al.* (22) reported in their study analyzing Youtube videos related to the SDF that there were a limited number of videos added by the university and that these had high quality content. This is similar to the results of previous studies, which indicated that the upload source is a predictor determinant of the quality of video content (42–

44). This analysis posits that there is a need for universities and professional organizations to augment the quantity of videos they generate.

According to the content results in terms of quality and usefulness scores of the analyzed videos, health information pages exhibited lower average scores than other video upload sources. On the other hand, the videos added by the health information pages achieved similar numbers of views, likes, and view rates as the videos prepared by the university with the highest quality and usefulness score average. This is consistent with the results of previous studies, which suggest that videos of low quality and usefulness may be more popular than useful videos (28,45). In addition, the study results of Hassona *et al.* (19) show that there is no correlation between video content, interaction index, or view rate. Hutchison *et al.* (46) also reported that the content quality of videos is not significantly affected by viewer interactions. Furthermore, the high standard deviations observed in view counts and view ratios warrant consideration. This significant variance is typical of YouTube analytics, because a few highly viewed videos generally accumulate the vast majority of views. Although this right-skewed distribution can complicate interpretation, non-parametric statistical tests were used for this reason.

When the evaluated videos were categorized according to their purpose, informative video content achieved higher quality and usefulness scores than technical video content. This may have been due to the fact that technical videos focused more on showing the clinical application steps of the SDF to the patient or parent rather than providing general information about the application. While technical videos may help alleviate dental anxiety by visually demonstrating that the SDF procedure is simple, quick, and painless, they often lack crucial educational components. They frequently fail to mention indications, advantages, or potential side effects like the characteristic black staining of the carious lesions. Conversely, informative videos address these topics comprehensively, helping to manage parents' expectations and playing a critical role in patient education and awareness. The current study has a number of limitations. First off, because Youtube is a dynamic site, the results may vary depending on when the videos were monitored. Second, a layperson could search for information on SDF using various keywords. To circumvent this problem for this research, the most popular term in the Google Trends application was used. The analysis in this study was limited to videos that were exclusively in the English language. Including additional languages in the search process has the potential to alter the outcomes, which should be acknowledged as a limitation of the study.

This study revealed that the content and quality of Youtube videos pertaining to SDF applications in patients were limited. To reduce the spread of misinformation and improve treatment knowledge, it is advisable for clinicians to establish personal Youtube channels and direct their patients to

these video resources. It is essential for dental professionals to caution their patients regarding the utilization of online platforms that may expose them to deceptive and erroneous information.

CONCLUSION

Youtube can serve as a valuable educational tool for patients seeking information on dental treatments, including the application of SDF. Nevertheless, due to the absence of a regulatory mechanism governing the individuals who upload videos or the content they upload on this particular platform, it is imperative for both patients and dental care professionals to exercise utmost caution in this matter. It is advisable for professionals to assess the videos uploaded to this interactive platform with regards to their clinical accuracy and quality. They should then provide recommendations for reliable videos to patients and/or parents, thereby facilitating their understanding of the treatment process. Furthermore, it is imperative for these professionals to exert greater diligence in generating trustworthy and competent medical information on social media platforms. Additional research is necessary to examine the efficacy and reliability of information pertaining to SDF applications across various social media platforms.

Abbreviations

AAPD: American Association of Pediatric Dentistry, ECC: Early Childhood Caries, GQS: Global Quality Scale, JAMA: Journal of American Medical Association, SDF: Silver Diamine Fluoride, URL: Uniform Resource Locators

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Authors' Contributions

Concept: H.A., K.S.; Supervision: H.A., K.S.; Resources: H.A., K.S.; Materials: H.A., K.S.; Data Collection and/or Processing: H.A., K.S.; Analysis and/ or Interpretation: H.A., K.S.; Literature Search: H.A., K.S.; Writing Manuscript: H.A., K.S.; Critical Review: H.A., K.S.

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Data Availability

Data is available from the corresponding author upon reasonable request.

Ethics Approval

Not required.

Conflicts of Interest

The authors declare no conflicts of interest.

AI Declaration

No AI tools were used.

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