Status of provision of semi-permanent makeup on YouTube in South Korea

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Background: YouTube, the most used media platform in the world today, is very universally used by people for getting information. Semi-permanent makeup, which is illegal when practiced by non-medical personnel, is easily accessible everywhere, including social media platforms such as YouTube.

Objective: The purpose of this study is to find out the status of semi-permanent makeup being introduced on YouTube.

Methods: Using the search term “Semi-Permanent Makeup” with YouTube’s search filter function, this study collected 362 videos uploaded in 2020 based on July 21, 2020, and analyzed by types of content, type of uploader, treated area, procedure object, and classification of video content.

Results: The main uploaders of semi-permanent makeup with YouTube are non-medical workers, especially uploading by education institutions (57%). In the survey according to the content classification, the introduction of the practice of semi-permanent makeup was the most at 53%. The most frequently introduced treatment site was eyebrow.

Conclusion: Through this research, we can see that semi-permanent makeup on YouTube is mainly introduced by non-medical personnel, and the contents of eyebrow treatment are dominated.

Keywords: K-beauty; makeup; medical service act; semi-permanent; YouTube

Introduction

Social media platforms such as YouTube, Netflix, and Facebook, play a crucial role in communication, information sharing, and development of the industry.

Among them, YouTube is the most-used media platform in the world since it was acquired by Google in 2006, and is currently available in 80 languages in 91 countries [1]. It is accessible to most people, and offers universal content, engaging all generations [2].

Video content, which is easier to understand and access than textual content [3], enables faster and more effective communication with people around the world. YouTube, one of the biggest video-sharing platforms, distributes information rapidly and effectively; thus, it is considered an influential and efficient tool [4].

As a new medium, YouTube is a convenient platform for the production, transmission, public relations, and exchange of information for the beauty industry [5].

YouTube plays an important role as a platform that has vari-
ous information about the industry, and is a crucial market. It collects and provides information about products and influences the decision to purchase, and has various content that offer makeup tutorials as well as introduces and reviews cosmetic products.

The concept of aesthetic treatment, which refers to all the means of beautifying the face and body, varies. The tattoo, first discovered on the body of Ötzi, the Iceman, who lived between 3370 and 3100 BC [6] and much before aesthetic medicine was conceptualized, has been developed and applied in various ways.

Semi-permanent makeup, a procedure that uses natural pigments to inject into the epidermis layer, is used for cosmetic purposes to produce a makeup effect on the untouched face [7]. However, even though it is regulated to be performed by only medical personnel due to the use of fine needles and anesthetic cream, as well as safety concerns with the ink, it has been universally performed by non-medical personnel [8].

Currently, the estimated number of non-medical practitioners in the semi-permanent beauty industry in South Korea is 350,000, and the number of people who have received related procedures is more than 13 million [9]. The semi-permanent makeup industry has grown as a trend in the beauty industry and has become one of the popular sectors for K-beauty [10].

YouTube, one of the biggest video-sharing platforms, has an enormous amount of information uploaded by unidentified users. This study will investigate the nature and popularity of tattoos in South Korea by analyzing the content of the YouTube videos on the semi-permanent tattoo and their uploaders, as well as their legal implications.

Materials and methods

YouTube allows you to filter content by upload date such as the day, week, month, and year, as well as by type such as videos, channels, playlists, movies, and programs. It is also possible to filter content according to the length of the video, features, and other sorting criteria.

This study collected videos on July 21, 2020, using the keyword “semi-permanent makeup” with a filter set to “this year.” For accuracy of the search results, the first 362 videos with the keyword, “semi-permanent tattoo,” were collected with their title, channel name, views, length, and so on. After watching each video, they were classified and analyzed by the type of content, type of uploader, treated area, procedure object, and classification of video content.

To exclude the investigator’s bias when analyzing YouTube, two different investigators performed the analysis, and if there were differences, the final decision was made through discussion between them.

The content of the video was classified into practice, client experience, advertising, business-related, pre- and post-operative photographs, and others. Uploaders were categorized into medical personnel, consisting of medical doctors and non-medical doctors, and non-medical personnel, consisting of individuals, beauticians, and educational institutions, among others. Microsoft Excel (Microsoft, Redmond, WA, USA) was used to collect and analyze the data.

Results

The result of analyzing a total of 362 YouTube videos showed that practice videos, including educational and live procedures, were the most prevalent with 192 videos (53%), followed by advertisements with 52 videos, and others with 39 videos (Table 1). Moreover, only 3.5% of the videos were uploaded by medical personnel, and the majority (96%) were uploaded by non-medical personnel (Fig. 1). Among non-medical personnel,

| Table 1. Types of contents of semi-permanent makeup on YouTube in South Korea |
|-----------------------------|------------------|--------|
| Content type                | No. of videos   | Percentage |
| Practice                    | 192             | 53.0   |
| Client experience           | 38              | 10.5   |
| Advertising                 | 52              | 14.3   |
| Business-related            | 14              | 3.9    |
| Pre- and post-operative photographs | 27 | 7.5    |
| Others                      | 39              | 10.8   |
| Total                       | 362             | 100    |

These results show the prevalence of practice videos compared to other types of content. Additionally, non-medical personnel dominate the uploads, indicating a significant influence of non-medical practitioners in the semi-permanent makeup industry.
When classified by treatment area, the eyebrow was the most popular area for treatment, and most videos about eyebrow treatment were practice videos (Fig. 2). When analyzing the contents of practice videos using the criteria of design, it was found that anesthesia, pigment, needle and machine, and disinfection was the most common procedure that was followed, in 71% of the total videos (Fig. 3). Videos related to anesthesia were 5%; pre- and post-operative disinfection procedures were not shown in the videos, and the information regarding the treated place was not available.

According to the classification by practice targets, 54% of the results were performed on humans, and 46% on rubber plates/paper (Fig. 4).

Of the videos, 50.5% showed only surgery and practice scenes without explanatory voiceover, 40.6% were performed with voice explanation, and 8.9% were lecture-style videos without practice scenes (Fig. 5).

**Discussion**

There are 362 videos on the semi-permanent tattoo with the education system, types, and educational content uploaded on YouTube this year.

This study found that the eyebrow is the most commonly treated area (36%), indicating a high demand for eyebrow tattoos. A study [11] on the most popular area for semi-permanent makeup also showed that 37% of respondents preferred to get their eyebrow tattoo done, and 35% chose eyeliners.

The percentage of practice videos was high in the type of content category, and 96% of uploaders were non-medical personnel, indicating that there is a high interest in semi-permanent tattoos among non-medical personnel such as beauticians.

However, the Medical Service Act in South Korea states that "non-medical personnel are prohibited from performing medi-
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practices; and even medical personnel shall not perform any medical practice other than those licensed: Provided, that any of the following persons can perform medical practices to the extent prescribed by the Ordinance of the Ministry of Health and Welfare” [12]. Also, Article 56-1 states that “no person other than the founder of a medical institution, the head of a medical institution, or medical personnel (hereinafter referred to as medical personnel, etc.) shall run an advertisement for medical services (referring to acts of indicating information on medical services, medical institutions, and medical personnel, etc. or give such information to consumers by means of newspapers, magazines, voices, sound, images, the internet, printed materials, signboards, and others methods); hereinafter referred to as ‘medical advertisement,’” [13] limiting only medical personnel to advertise medical services, and restricting non-medical personnel from uploading medical information on YouTube.

Of the videos used in this study, 54% was performed on humans. However, this is a violation of the Medical Care Act since 96% of the videos were uploaded by non-medical personnel. On the other hand, none of the videos addressed pre- and post-operative disinfection procedures, and only 5% of videos showed the anesthetic process. Moreover, performing medical practices on rubber plates/paper for educational purposes and information sharing does not have any legal issues, but it can encourage imitation by non-medical personnel.

Research has shown that heavy metals that can penetrate the skin causing inflammation and skin problems were found in the semi-permanent cosmetic pigments and dyes [14]. According to Halliday and Jones [15], poor disinfection procedures and hygiene mismanagement can cause infectious disease, allergic reactions, keloid formations, and herpes simplex. Thus, hygiene should be strictly managed for the safety of the patients. There is potential for metachromatic, cicatrix, infectious disease, and eye injuries, and if the pigment is misplaced, laser treatment may be required to remove the semi-permanent pigment [16].

Compared to other cosmetic surgeries that are technically limited to medical personnel, semi-permanent makeup is easily accessible to non-medical personnel as there are a lot of semi-permanent makeup training courses available to them. Thus, even though the semi-permanent makeup is regulated to be practiced by only medical personnel, it is widely performed by non-medical personnel due to the poor awareness of the public on safety issues.

The management of tattoos and semi-permanent tattoos in the United States is divided into two parts. The federal government regulates the inks used for tattoos according to the Food and Drug Administration, and state governments and local governments are in charge of managing the tattooing practice itself, its practitioners, and shops. All states, except for three, have regulations on tattoos [17]. Moreover, in the United Kingdom and Germany, non-medical personnel can make tattoos after following several regulations regarding hygiene and safety.

Thus, to protect the public from potential risks regarding semi-permanent makeup treatment, it is necessary to introduce new regulations for non-medical personnel to safely practice semi-permanent tattoo treatments.

Our study has several limitations. First, the study analyzed a relatively small number of YouTube videos (362). Second, it was not possible to know the global trend of semi-permanent makeup treatments by analyzing only the content of region-specific YouTube videos.

Through this research, we can see that semi-permanent makeup videos on YouTube are mainly introduced by non-medical personnel, and the majority of the content focus on eyebrow treatment. A legal safety system for safe semi-permanent tattoo treatments should be established based on the results of this survey.

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Conflicts of interest

The authors have nothing to disclose.

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