



# Running title: Orthognahic surgery and cleft palate procedure in instagram

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## ABSTRACT:

**BACKGROUND:** The aim of this short study was to evaluate the quality and content of the Instagram posts about orthognathic surgery and cleft palate.

**MATERIALS AND METHODS:** Two hashtags #cleftpalate and #orthognathicsurgery were searched on Instagram in this retrospective Instagram post analysis study. Selected 50 posts for each hashtag were analyzed for who posted the video, number of likes and comments, patient satisfaction, sex of the patient.

**RESULTS:** Most of the posts about #Cleftpalate were uploaded by surgeons (45). Most of the posts about #orthognathicsurgery also were uploaded by surgeons (48). Most of posts were liked and commented between 0-500 and all the patients who underwent were highly satisfied with the treatment done.

**CONCLUSION:** Adapting social media and instant messaging into our cleft palate care has been welcomed with high satisfaction among our patient population, increasing their knowledge, saving them time from returning to the clinic, and allowing them beneficial interaction with other families coping with similar conditions. Patients should be educated by orthodontists and maxillofacial surgeons about Instagram platform that it is not an adequate or accurate source of information about orthognathic surgery and cleft palate in its current form.

**KEYWORDS:** orthognathic surgery, cleft palate, instagram, social media.

## INTRODUCTION:

Internet is now an indispensable part of human life and a main source of information. Patients view the Internet as a valuable source of health information and it affects their relationship with healthcare professionals.(1,2) Despite the potential benefits of finding health information on the Internet, the possibility of misinformation becomes a serious issue. The dissemination of incorrect information through social media accounts is an important problem, as anyone can share anything on these media without the supervision of experts or moderators.

Orthognathic surgery requires precise evaluation of complex dentofacial deformities of the craniofacial skeleton. The success of the surgical plan is not only dependent on the accuracy of the skeletal and dental diagnosis of the deformity but also is unequivocally dependent on presurgical prediction of the proposed jaw movements.(3) Traditionally, this has involved detailed preoperative clinical examination, standard facial photography, cephalometric radiographs with tracings, dental impressions, and articulator-mounted models. The end goal of all of these steps is to develop a representative blueprint of the current relationship of the maxilla/mandible and the associated dentofacial skeletal dysplasia. That relationship then is used to facilitate model surgery to determine the feasibility of the proposed jaw movements and to subsequently directly fabricate surgical guide splints which are critical for the accurate intraoperative positioning of the maxilla and/or mandible.(4)

Maxillofacial surgery as a discipline was not an organized specialty until the latter half of the 20th century requiring particularly trained surgeons with masterful knowledge of both anatomy and surgical techniques to accomplish successful bony reconstruction.<sup>3</sup> Orthognathic surgery in patients with dentofacial abnormalities is an original field within maxillofacial surgery.(5) In present-day orthognathic surgery, the spectrum of surgical intervention ranges from simple single-jaw and double-jaw surgery to complex cleft craniomaxillofacial orthognathic surgery.

The failure of fusion of the palatal shelves of the maxillary processes, resulting in a cleft of the hard and/or soft palates.[6] Clefts arise during the fourth developmental stage. Exactly where they appears is determined by locations at which fusion of various facial processes failed to occur, this in turn is influenced by the time in embryologic life when some interference with development occurred.[7] Clefts of lip and palate can occur isolated or together in various combination and/or along with other congenital deformities particularly congenital heart diseases. They are also associated features in over 300 recognized syndromes.[8]

Patients with oro-facial cleft deformity need to be treated at right time and at right age to achieve functional and aesthetic well-being. The treatment process is complex, multidisciplinary and interdisciplinary approach. Successful management of the child born with a cleft lip and palate requires coordinated care provided by a number of different specialties including oral/maxillofacial surgery, otolaryngology, genetics/dysmorphology, speech/language pathology, orthodontics, prosthodontics, and other. This successful reconstruction routinely requires multiple phase of surgical intervention.[9,10]

Adult patients use internet as a source of information as they try to decide about orthognathic surgery. Some patients usually receive information from their peers who have orthognathic surgery before the procedure, while others receive detailed information directly from the maxillo-facial surgeon. Both approaches have their advantages and disadvantages, and people can now have quick and easy access to information about any subject in the field of medicine or dentistry through social media.[11,12]

Instagram is a free photograph and video sharing application also serving as a social media platform. It was founded in October 2010. It acquired a huge user base in a very short time and currently ranks the 15th in the

list of most visited web sites in the world. Considering it has more than one billion users, the average daily visitor spends 5 minutes 42 seconds on the on-site, and more than 100 million photographs or videos are uploaded daily. Instagram hosts all types of accounts in all fields imaginable and as for the fields of dentistry and medicine, many posts are performed by doctors, clinics, and patients with a variety of videos or photographs covering personal experience or suggestions. Also, patients are seeking aesthetic surgery to improve their appearance on Instagram, and other social media platforms. However, all this information is uploaded without any type of expert review; therefore, its accuracy and reliability are not guaranteed.[13,14,15]

The aim of this study is to evaluate the quality and content of the Instagram posts about the orthognathic surgery and cleft palate.

#### MAERIALS AND METHODS:

Public posts on Instagram with the hashtags “#cleftpalate” and “#orthognathicsurgery” were screened manually. This study was planned as a cross-sectional study. This study did not require the approval of the ethics committee, since it contains only public data. The total number of posts per hashtag was recorded and 50 posts were selected for each hashtag in order of date and relevance. Furthermore, who posted the video, number of likes and comments, patient satisfaction, sex of the patient were noted. Posts that were duplicates, or not related to orthognathic surgery were excluded from the study. After data collection statistical analysis was done in SPSS software. Objective and subjective evaluations were performed. The data was tabulated. The data analysis was performed using SPSS software, the Chi square test was done, P value <0.005 was considered statistically significant.



## RESULT:

**Comparison of Instagram characteristics of posts tagged with #cleftpalate and #orthognathicsurgery**

		CLEFT PALATE(50)	ORTHOHGNATHIC SURGERY(50)
POSTED BY	SURGEON	45	48
	PATIENT	5	2
NO OF LIKES	0-500	14	26
	501-1000	30	14
	ABOVE 1000	6	10
NO OF COMMENTS	0-500	46	48
	501-1000	3	1
	ABOVE 1000	1	1
PATIENTS SATISFACION	HIGHLY SATISFIED	48	49
	MODERATELY SATISFIED	2	1
SEX OF PATIENTS	MALE	35	46
	FEMALE	15	4

The post with cleft palate included 45 surgeons and 5 were posted by the patients. As of their assessment 14 posts were liked between 0-500, 30 liked between 501-1000 and 6 liked above 1000. 46 posts were commented between 0-500, 3 commented between 501-1000 and 1 commented above 1000. 48 patients were highly satisfied and 2 were moderately satisfied with cleft palate surgery.

The post with orthognathic surgery included 48 surgeons and 2 were posted by the patients. As of their assessment 26 posts were liked between 0-500, 14 liked between 501-1000 and 10 liked above 1000. 48 posts were commented between 0-500, 1 commented between 501-1000 and 1 commented above 1000. 49 patients were highly satisfied and 1 were moderately satisfied with orthognathic surgery.

## DISCUSSION:

As the power of social media increases every day, millions of people rely heavily on their social media accounts for information to the extent of seeking answers on the Internet first for their medical or dental problems instead

of consulting with doctors. The Instagram application is one of the social media platforms patients prefer as it provides easy access to information, videos, and photographs about orthognathic surgery as well as other health-related topics. The number of photographs or videos uploaded daily is over 100 million and patients have quick access to photographs, comments, or videos about orthognathic surgery. In this study, we aimed to investigate the content of posts shared about orthognathic surgery on Instagram. (16)

Hegarty et al evaluated the orthognathic surgery videos with the highest number of viewers on another social media platform YouTubeTM. They concluded that 55.83% of the videos presented low quality information and those with perfectly informative content made up a percentage as small as 9.17%. [17]

Another social media study performed by Coleman et al investigated how patients used social media in relation to orthognathic surgery. The patients were asked to fill a questionnaire containing 15 questions. It was observed that 87% of the participants had less anxiety after researching orthognathic surgery in social media. (18)

Patients may shy away from asking as many questions as they would like to interview with their doctors. This is one of the factors that make them turn to the Internet, and social media as a source of information. However, the reliability and accuracy of the photographs and videos shared on Instagram are controversial because it is a 'social' platform, everyone shares their opinion. Most videos on social media about orthognathic surgery are posted by patients or clinical advertisement agencies and small number of them are coming from the field specialists, such as maxillofacial surgeons or orthodontists. [19]

To better educate individuals about the mentioned surgical procedures on social media, one recommendation can be that authoritative bodies such as associations of orthodontists and maxillofacial surgeons promote the advantages of orthognathic surgery by reposting good quality content published by clinician members.

## CONCLUSION:

Adapting social media and instant messaging into our cleft palate care has been welcomed with high satisfaction among our patient population, increasing their knowledge, saving them time from returning to the clinic, and allowing them beneficial interaction with other families coping with similar conditions. Patients should be educated by orthodontists and maxillofacial surgeons about Instagram platform that it is not an adequate or accurate source of information about orthognathic surgery and cleft palate in its current form.

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