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RESEARCH ARTICLE

POST EXTRACTION COMPLICATIONS AND MANAGEMENT- KNOWLEDGE BASED STUDY AMONG UNDERGRADUATE DENTAL STUDENTS IN KHAMMAM, TELANGANA

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Abstract

Background: Complications following exodontia is not always avoidable. So, dentists should be aware about the treatment to manage complications following exodontia. Hence, it is necessary to ascertain dental students' knowledge and attitude towards post extraction complications and its management.

Aim: To assess the knowledge regarding post extraction complications and its management among dental students in Khammam, Telangana.

Material and Method: Among 150 undergraduate (clinical) students a cross-sectional questionnaire survey was conducted in a tertiary care teaching dental hospital. The sample consists of 87 final years and 63 interns. They were asked to fill a questionnaire which was sent to their mobiles through google link which consists of 20 questions regarding knowledge and attitude about post extraction complications.

Result and Conclusion: Majority of dental students have good quality of knowledge towards post extraction complications. Both the final years and interns have almost equal knowledge regarding post extraction complications. Although dental students have good quality of knowledge towards post extraction complications it is not adequate to manage some rare complications. So, there it is necessary to upgrade their knowledge. The need for this study is if the complications of post extractions are not treated properly it might lead to furthermore life-threatening complications such as morbidity and death. So it is important for a dental to have an adequate idea and knowledge regarding post extraction complications including some rare complications along with its management.

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Introduction:-

Extraction is the most common dental procedure carried out in dental clinics. Complications following dental procedures do not occur generally, but they are not always avoidable. Sometimes dentists may face post extraction complications. In those cases, dentists should be aware about the treatment to manage post extraction complications.¹

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Exodontia can be defined as the painless removal of whole tooth or tooth root with minimal trauma to the investing tissues with uneventful wound healing, thus ensuring no postoperative prosthetic problem². Post extraction complications of the teeth can be serious and sometimes fatal. Complications of post extraction can be immediate complications, delayed complications, late complications, systemic complications. Some of the immediate complications like failure to luxate/remove the tooth, nerve injury, aspiration of tooth/ root, hemorrhage primary, Temporomandibular joint dislocation/subluxation, laceration of gums, lips, tongue, fracture of tooth, alveolus, maxilla, mandible, displacement of tooth or root in facial spaces, maxillary sinus, lingual pouch. Some of delayed complications include hemorrhage-secondary reactionary, pain, dry socket, Infection, Trismus, Ecchymosis, Swelling. Late complications include chronic osteomyelitis, osteoradionecrosis, nerve damage, anesthesia/paresthesia, chronic pain, some of the systemic complications include syncope, fits, respiratory obstruction, hyperventilation, myocardial infraction⁴⁻⁸. Complications may vary based on different factors which include age, gender, tooth impaction level, smoking, health condition of the patient, intake of contraceptive medicines, surgeons experience, quality of oral hygiene and many other factors³.

Management of these complications require adequate training and knowledge. So dental should train adequately during their curriculum about causes, management, surgical procedure, prevention, and post-surgical instructions that should be given to the patients to avoid untoward sequelae.

The need for this study is that untreated and unrecognized post extraction complications may lead to further severities and it can get to morbidity sequelae. So it is necessary to be aware of all the rare complications earlier and should be managed accordingly as early as possible to avoid untoward sequelae.

Aim:-

To assess the knowledge regarding post extraction complications and management among dental students in Khammam, Telangana.

Objectives:-

To determine the knowledge regarding post extraction complications and management among dental students based on gender.

To determine the knowledge regarding post extraction complications and management among dental students based on year of study.

Materials And Methods:-

A cross-sectional questionnaire survey was conducted on dental students, in a tertiary care teaching dental hospital Khammam. In a Study sample of 150, final years were 87 and 63 interns. A specially designed questionnaire consisting of 20 closed ended questions was used to assess knowledge regarding post extraction complications. The first few questions were regarding Demographic data (name, age, gender, year of study, mobile number/email id), followsthe next few questions were based on knowledgeof students towards post extraction complications and management. Pilot study was conducted among 30 dental students through online websites, to know the reliability and feasibility of the study. The sampling method used is convenience sampling. Data was collected using a google form link which was shared to students through social networking websites. Ethical clearance was obtained from the institutional ethical committee. The purpose of the study was explained and informed consent was obtained prior to the inspection of the study.

Study was conducted between July 30th– August 06, 2021, among the dental undergraduates' final years and interns. The students who were willing to participate were included in this study and the students who were not interested to participate were excluded from this study. The filled questionnaire responses were entered in excel sheet and statistical analysis was done using SPSS (statistical package for social sciences) 23 version, Chi square test was done to check the association and p value was set at 0.05.

Result:-

Figure 1 depicts the demographic profile of respondents based on age 48% from the total sample belong to 21-22 years and 50% belong to 23-24 years and 2% belong to 25-26 years, the mean age among the total subject is 23.5.

Based on gender 84.67% from the total sample were females and 15.33 were males. Based on year of study 58% were 4th years and 42% were Interns.

Table 1 depicts the comparison of knowledge regarding post extraction complications and management based on gender and year of study. On comparison of year of study, When asked a question about other name for dry socket (58.73%) of interns and (40.23%) of 4th years stated alveolar osteitis, (3.45%) of interns and (3.45%) of 4th years stated dento-alveolar abscess, (38.10%) of interns (44.83%) of 4th years stated both alveolar osteitis and dento-alveolar abscess, (3.17%) of interns and (44.83%) of 4th years stated none of the above. Hence, interns have more knowledge regarding this question than 4th years which is statistically significant. When asked a question about which conditions make extraction more difficult (4.76%) of interns and (14.94%) of 4th years stated grossly decayed tooth, (20.63%) stated abnormal root morphology, (58.73%) of interns and (32.18%) of 4th years stated teeth exhibiting hypercementosis, (15.87%) of interns and (26.44%) of 4th years stated endodontically treated tooth, Hence, 4th years has more knowledge than interns which is statistically significant. When asked a question about displacement of tooth into maxillary sinus is highly seen during extraction of: (38.10%) of interns and (29.89%) of 4th years stated maxillary 1st molar, (12.70%) of interns and (16.09%) of 4th years stated maxillary 2nd molar, (17.46%) of interns and (12.64%) of 4th years stated maxillary 3rd molar, (31.75%) of interns and (41.38%) of 4th years stated all the above. When asked a question about how long it takes for a sinus perforation to heal (23.81%) of interns and (17.24%) of 4th years stated six weeks, (14.29%) of interns and (19.54%) of 4th years stated one week, (36.51%) of interns and (28.74%) of 4th years stated four weeks, (25.40%) of interns and (34.48%) of 4th years stated one month. When asked questions about causes of swelling (1.59%) of interns and (8.05%) of 4th years stated swelling after extraction is normal, (12.70%) of interns and (17.24%) of 4th years stated swelling is because of trauma to nearby tissues, (7.94%) of interns and (5.75%) of 4th years stated swelling is a part of body's natural healing process, (77.78%) of interns and (68.97%) of 4th years stated all the above stated mentioned are the causes.

When asked a question about other name for dry socket (53.54%) of females and (17.39%) of males stated alveolar osteitis, (0.00%) of females and (13.04%) of males stated dento-alveolar abscess, (38.58%) of females and (60.87%) of males stated both alveolar osteitis and dento-alveolar abscess, (7.87%) of females and (8.70%) of males stated none of the above. Hence, females have more knowledge compared to males and it is statistically significant. When asked a question about which of these conditions make extraction more difficult (10.24%) of females and (13.04%) of males stated grossly decayed tooth, (21.26%) females and (39.13%) males stated abnormal root morphology, (48.82%) of females and (13.04%) of males stated teeth exhibiting hypercementosis, (19.69%) of females and (34.78%) of males stated endodontically treated tooth. Hence, males have more knowledge compared to females and it is statistically significant. When asked a question about displacement of tooth into maxillary sinus is highly seen during extraction of: (35.43%) of females and (21.74%) of males stated as maxillary 1st molar, (14.17%) of females and (17.49%) males stated as maxillary 2nd molar, (15.75%) females and (8.70%) males stated as maxillary 3rd molar, (36.64%) females and (52.17%) stated as all the above. When asked a question about how long does it take for a sinus perforation to heal (22.83%) females and (4.35%) males stated as 6 weeks, (16.54%) females and (21.74%) stated as 1 week, (30.71%) of females and (39.13%) of males stated as 4 weeks, (29.92%) females and (34.78%) males stated as 1 month. When asked a question about causes of swelling after tooth extraction (6.30%) females and (0.00%) males stated as preferentially normal, (14.96%) females and (17.39%) males stated trauma to nearby tissues, (7.87%) of females and (0.00%) males stated as it's a part of body's natural healing process, (70.87%) females and (82.61%) males stated as all the above mentioned points are causes of swelling.

Discussion:-

Complication rates of exodontia may vary based on different factors which includes age, gender, health condition of the patient, tooth impact level, quality of oral hygiene, smoking, surgeons experience, intake of contraceptive medicines and surgical techniques². Anxiety is the main reason for encountering complications³.

In this study when asked a questions about what all are the post extraction complications 83.33% from the total sample responded correctly, which is similar to the study conducted by Vivek D Menon and M R Muthusekhar (97.2%)¹ and H. Aravinth and Dhanraj Ganapathy (80%)⁹.

Extraction difficulties are multifactorial and unpredictable¹⁵. Severity gets to morbidity sequelae when tooth get displaced to adjacent anatomic spaces^{15,16}. Complications rates in older patients are more and last longer due to increased bone density¹⁷. In the present study only 22% from the total sample stated that endodontically treated tooth are difficult to extract, which is contrast to the study conducted by Vivek D Menon and M R Muthusekhar

(42.4%)¹ and H.Aravinth and Dhanraj Ganapathy(33.3%)⁹. This contrast is seen because of lack of knowledge due to online mode of teaching where students are not more attentive and also fall short of clinical exposure.

Following proper surgical technique and through medical history before extraction can limit complications¹⁴. In this study when asked a question about which conditions can favors dry socket after extraction only 5.33% of students stated women taking oral contraceptive pills, followed by 11.33% stated patient with uncontrolled diabetes and 6.67% stated patients age between 30-40, which is contrast to the study conducted by Vivek D Menon and M R Muthusekhar, H.Aravinth and Dhanraj Ganapathy and Dr. M. P.Santhosh Kumar . This contrast is seen because of lack of knowledge due to online mode of teaching where students are not more attentive and also fall short of clinical exposure.

Adequate pressure over the extraction socket during bleeding assist in achieving hemostasis²¹. In elderly patient's ecchymosis is treated with moist heat application¹⁹. Most common post extraction complication after any form of surgery includes post-operative bleeding 1.7%, hematoma 1.7%, post-operative pain 1.5%, and purulent discharge 1.5%. dry socket 5-68¹². 5% is the next common complication¹³ Common age for dry socket 20-40 years¹⁹. Knowledge about some rare complications must be necessary.

Conclusion:-

Although dental students have knowledge regarding post extraction complication and its management it is not adequate to manage some rare complications. So, there is need for more clinical exposure which help them increase awareness and transforming their theoretical knowledge into practical expertise. Students should improve and have to upgrade their knowledge. Dental awareness programs or lectures which gives additional knowledge to aid in diagnosis, treatment planning and management.

Limitations:

The current study was conducted in a single institution and convenience sampling was used. So, Generalisation of the results should not be done with caution.

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Conflict Of Interest:

None.

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