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Approaches And The Management Of Patients In Oral Surgery During COVID- 19 Pandemic Kosovo Region.

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ABSTRACT

Treatment of Covid 19 positive patients in Oral surgery has a very high risk transmission of SARS Covid 2 because it is associated with the specific nature of dental interventions, which includes: face to face communication, usage of sharp instruments, saliva and other oral fluids that the patient might contain. Aspect discussions, data collection and the purpose of the review of managing in oral surgery during the COVID-19 pandemic is to provide protection for both, technical and human resources and to avoid unnecessary exposure to infected patient. The research methods are used in electronic bibliographic databases of relevant scientific literature such as, world health organization, Scisearch, etc. Practical Guidelines for Dentistry professional during the pandemic COVID-19 virus should be adjusted in accordance with the directions of the Center for Diseases Control and Prevention. Administration for Occupational Health and Safety, American Dental Association and Alberta Dental Association & Collage, Canada.

Keywords: Covid-19, Sars-Cov-2, Pandemic, Protective Equipment, Oral Surgery, Practical instructions for Dentistry Professionals.

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INTRODUCTION

Treatment of Covid Positive Patients in Oral Surgery is associated with a high risk of transmission of COVID – 19, as it is associated with the specific nature of Dental Interventions which include face-to-face communication, use of sharp instruments and extensive exposure to saliva, and other oral fluids of the patient. It was obvious already at a very early stage of the pandemic that healthcare workers are affected in 29% of the cases, which is disproportionately high. During the SARS-CoV-2 pandemic, the specialty must organize patient treatment in such a way that infection transmission is reduced to a minimum, while all relevant treatment options are at hand to provide adequate patient care. Concepts have to be developed that take into account the possible need for triaging patients according to the degree of urgency of treatment in the field of Oral Surgery. Currently, specific guidelines and recommendations are just evolving (1).

MATERIALS AND METHODS

The research method is the electronic bibliographic databases of the relevant scientific literature such as: MEDLINE, EMBASE, CINAHL, ScienceDirect and Google search engine.

Literature searches were conducted for English language articles using index terms (e.g., Medical Entities Titles [MoH], Emtree) and free text keywords to identify acceptable reports.

The search terms used were "coronavirus 19 disease, COVID-19, severe coronavirus severe respiratory syndrome 2, SARS-CoV-2, transmission, pandemic, oral surgical procedures, oral surgery, dental equipment, personal protective equipment, prevention and infection control "The last search was conducted on 23.03 2021."

RESULTS

It is important to have a clear and well-communicated concept of the benefits of procedures in Oral Surgery.

Although it may be easy to distinguish between elector and emergency procedures, the boundaries between intermediate priority and urgent and emergency interventions can sometimes be blurred.

Therefore, relevant guidelines may vary between institutions or may depend on the individual characteristics of an institution.

If a conservative therapy is equivalent to surgery, it should be preferred at times with limited capacity for surgery.

Therefore, following the protective protocols in the COVID-19 crisis is of great importance for a dental environment where it can be done as much as possible to prevent the spread of the virus as well as to perform the necessary Dental services.

WHO through "Open data Kosova" (update) daily presents statistical data (collected by the National Institute of Public Health of Kosovo) on the number of infected persons and their gender within 24 hours (2).

The data presented in figure 1 are official data from the National Institute of Public Health of Kosovo.

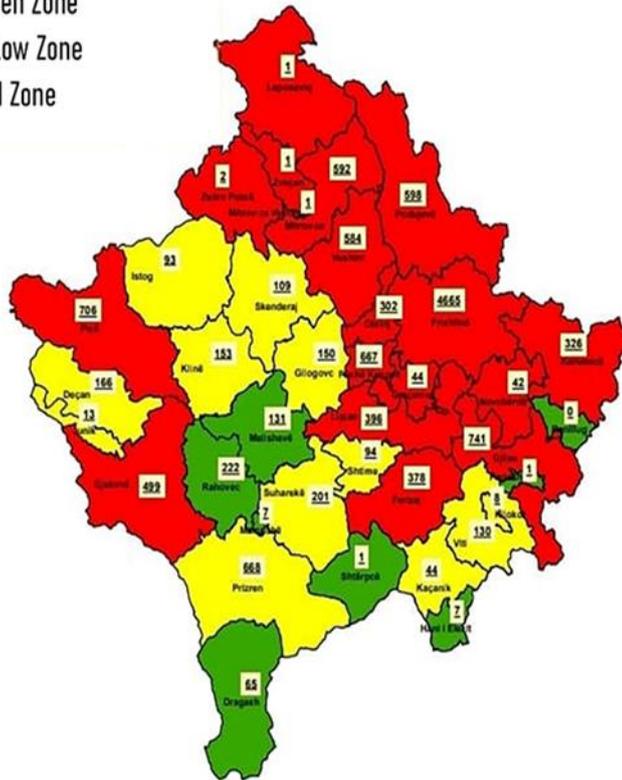
The following data, such as preventive measures and acquaintance with the patient's status, can be obtained through telephone or other electronic equipment's.

Epidemiological overview of active cases with COVID 19 in the Republic of Kosovo from 13 March - 22 March 2021

Day 375	Infected during the last 24 hours	Total infected	Recovered during the last 24 hours	Total recovered	Dead during the last 24 hours	Total dead	Active cases	Tested during the last 24 hours	Total tested	Infected in 100k habitants	Revered in 100k habitants	Dead in 100k habitants	Population
Cases	705	83717	522	69123	10	1786	12808	3922	393713	4498	3879	100	1782115
%	17,98	21,26	0,62	82,57	0,01	2,13	15,30	0,22	22,09	0,26	0,22	0,01	

Municipality	Infected	Recovered	Dead	Active cases	Total cases
Prishtine	32756	27823	255	4665	2151
Gjilan	4634	3754	109	741	972
Prizren	4027	3153	206	668	346
Peje	3897	3092	99	706	719
Fushë Kosovë	3870	3154	69	667	1712
Mitrovicë e Jugut	3736	3054	90	572	660
Podujevë	3655	3002	56	538	734
Ferizaj	3634	3145	105	378	360
Gjakovë	3588	2969	120	499	532
Vushtrri	2789	2132	73	584	962
Lugan	2436	2006	34	396	690
Glogoc	1489	1291	48	150	248
Obiliq	1402	1074	28	302	187
Viti	1396	1211	55	130	274
Suharekë	1263	1071	71	201	351
Kamenice	1166	703	47	326	172
Shekulleraj	1048	909	30	109	208
Dejan	968	777	25	166	393
Rahovec	959	675	64	222	294
Malishevë	932	754	47	131	234
Kisine	900	711	36	153	382
Shkime	701	596	21	94	348
Istog	676	553	30	93	227
Kaçanik	481	471	16	44	178
Gjogjadh	373	275	33	65	191
Gracanice	384	139	1	44	351
Novobërde	127	84	1	42	590
Hani i Elezit	95	86	2	7	70
Jurine	92	77	2	13	204
Mamuzhe	63	50	6	7	120
Kilokot	58	50	0	8	296
Zubin Potok	58	54	2	2	30
Mitrovicë e Veriut	49	45	3	1	8
Zveqan	34	32	1	1	14
Snidepce	31	27	3	1	15
Leopoldin	25	21	4	1	8
Rahodiq	8	8	0	0	0
Partesh	5	4	0	1	5
Total	83717	69123	1786	12808	

Green Zone
Yellow Zone
Red Zone



Total cases hospitalized with COVID 19 on 23.03.2021		
Confirmed with COVID 19	Cases	%
Hospitalized	706	9,29
O ₂	669	94,76
CPAP	25	3,54
Respirator	11	1,56

Source: MSH, IKSH, AKK and ASK

1:500000

Figure 1: Number of infected residents with COVID -19 by Cities of Kosovo. Graphs and Statistic updated on 03/23/2021 07:25:10.

Urgency and Emergency in Oral Surgery

Dental urgency refers to conditions that require necessary interventions to stop major, intense pain and infections (3).

These conditions include:

1. Severe pain caused by inflammation of the pulp & apical periodontium;
2. Pericoronitis;
3. Postoperative osteitis, alveolitis.

Guide for applying dental interventions to patients with COVID 19:

- Localized abscess, pain and swelling;
- Soft and hard tissue trauma;
- Tooth traumas such as: avulsion, luxation;
- Dental interventions that precede medical interventions;
- Tissue biopsy;
- Patient interventions should be minimally invasive.

From rapid measures it is important to distinguish non-emergency dental interventions such as:

- First or systematic visit;
- Application of regular preventive measures;
- Removal of soft and hard deposits;
- Orthodontic interventions, except when they do not cause pain, infection or trauma;
- Asymptomatic tooth extraction;
- Restorative procedures which include asymptomatic carious teeth;
- Aesthetic dental interventions.

Measures to prevent health professional infection and nosocomial transmission at dental clinics (4):

- Obligatory, only one patient and / or attendant can stay in the waiting room;
- At the entrance / reception, there should be disinfectant and instructions for patients on how to use;
- All magazines, toys, etc. should be removed as a precaution against contamination / pollution;
- Given that the coronavirus stays on the surface for 24+ hours, it is very important to keep all surfaces clean and disinfected. This applies to the dental office, toilet, waiting area, and it is especially important to disinfect the operating room as often as possible;
- Commonly used disinfectants, such as 0.1% sodium hypochlorite or 62% -71% ethanol, have been proven to be very effective;
- The ventilation of the environment should be as natural as possible and the ventilation with air conditioner should be avoided;
- Extra care for instruments by applying the principles of Aseps and Antiseptics (2).

Precautions in the operating room

Prior to taking a patient to the surgical room, a test for SARS-CoV-2 should be performed. An emergency patient that leaves no time for testing should be treated as being infective.

In the operating room, negative pressure must be established with the aim to reduce dissemination of the virus. Before entering the operating room, every staff member needs to put on personal protective equipment. Besides an FFP3 respirator, it is also important to wear a face shield. At any time, the number of staff members in the operating room should be minimal.

The personal protective equipment of the surgical team should be completed by a water-tight sterile gown. Whenever possible an experienced team should perform the surgery. During the procedure, leaving or entering the operating room should be limited to a minimum.

If an extra oral approach is a relevant alternative to an intraoral one, it should be preferred. Reducing aerosol formation to a minimum should be a priority. Excessive water cooling for dental drill, saws, ultrasonic devices, and piezoelectric devices should be avoided. Instead of drilling screw holes, self-drilling screws should be used. The use of osteotomies should be considered wherever possible. Electric cautery should be avoided or performed with the lowest power possible and a smoke evacuation system (1).

Some dental procedures favor the creation / spread of aerosols, which can be potentially hazardous to Covid-19 transmission. Therefore, it is recommended that dentists limit such procedures to protect patients, staff and themselves. Pandemic Protective Equipment (PPEs) that do not create aerosols.

Current standards for infection prevention and control are applied with appropriate personal protective equipment: gloves, surgical mask, and goggles.

PPEs that create aerosols for dental procedures that create aerosols, in addition to current standards for the prevention and control of infection, additional personal protective equipment is needed: protective clothing, gloves, mask N-95 / respirator, suitable goggles or face shield (4).

Additional measures before treatment:

1. Use 1% 5cc hydrogen peroxide for rinsing for 30 seconds before examining the oral cavity;
2. Use Cofferdam for isolation;
3. Use high volume aspirators during dental procedures (4).

DISCUSSION

The COVID-19 pandemic puts pressure on the healthcare system, because of this there is a need for continuous adaptation of recommendations and guidelines.

In oral surgery elective procedures such as urgent and emergent procedures are performed.

When treating patients during the SARS-CoV-2 pandemic, a major issue is disease transmission from the patient to the medical staff. Patients with symptomatic COVID-19 should be treated in the field of oral and maxillofacial surgery only when the indication is urgent or an emergency. Symptomatic patients are a major source of viral transmission and therefore must be treated in an adequate infrastructure with personal protective equipment.

Additionally, asymptomatic patients and patients undergoing the incubation period can be carriers of SARS-CoV-2 and can be responsible for infection transmission. It is even debated whether patients in the recovery phase are potential sources of virus transmission. As with every other infectious disease, the approach to the situation must be, that the patient must be considered infective as long as the opposite is not proved. Obviously, there is a need for sensitive, reliable, and rapid testing of patients who enter the private practice or the hospital for an urgent or emergency treatment. The potential patients should be advised to first opt for a consultation on the telephone before they come for a face-to-face consultation. A relevant number of issues can be clarified by telephone, helping to avoid face-to-face contact (1).

CONCLUSION

The major aim is to protect patients as well as the medical team from unnecessary infection and to keep the healthcare system running effectively.

Although it might be easy to distinguish between elective and emergency procedures, the boundaries between interventions of intermediate and urgent priority might be blurred sometimes. Therefore, respective guidelines might differ between institutions or might be dependent on individual characteristics of an institution.

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