

Short Communication

Role of a dentist in environment protection-A short communication

M Nazargi Mahabob*

Associate Professor, Department of Oral & Maxillofacial Surgery and Diagnostic Sciences, College of Dentistry, King Faisal University, Al Ahsa, Kingdom of Saudi Arabia

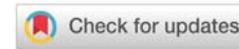
Received: 23 September, 2020

Accepted: 14 April, 2021

Published: 15 April, 2021

*Corresponding author: Dr. Nazargi Mahabob, MDS, Associate Professor, Department of Oral & Maxillofacial Surgery and Diagnostic Sciences, College of Dentistry, King Faisal University, Al Ahsa, Kingdom of Saudi Arabia, Tel: 0559118827; E-mail: nazargimahabob@yahoo.com

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When we turn on either news channels or social media, we can see the interesting news about plans of colonizing Mars or other planets. However, at the same time it also mentioning the difficulties, uncertainties and cost of the projects. All these because Earth is the only known and proven planet is having liveable environment in the Universe. An environment is the natural surroundings that help living things to grow, develop and nourish naturally and determines our existence on the planet possible. What we are using for our own existence is coming from the environment. If the stability of the environment disturbed, the very own existence of the life will become questionable. One of most affecting thing to the environment stability is pollution. Pollution of environment is affecting our lives physically, emotionally, socially, economically, and intellectually. It has become one of the major issue around the world and it can solved by collective effort of all. In saving the environment dentists also having responsibilities [1].

Dentist as a professional dedicated to promote and enhance oral health and well-being of the population and he has an exuberant endeavor in the health care waste. As an individual dentist, he/she may yield a small-scale dental waste; the overall produced wastage may have a huge effect on the environment. According to the statistics in each year dentists alone responsible for dumping 3.7 tons of mercury, 1.7 billion sterilization pouches, 680 million light handle covers, patient bibs and chair barriers, 28 million litres of toxic X-ray fixer and 4.8 million foils in the environment. Some among these are a serious threat to the environment and directly affects its stability [2].

This paper deals about impact induced by dentistry on the environmental and measures that can be taken to reduce harmful wastes. The concept eco-friendly dentistry

or green dentistry is relatively new to dental practice and it emphasizes the practice of eco-friendly approach and insists on conservation of resources and reduction of environmental pollution [3].

Dental amalgam

Dental amalgam is one of most widely used durable, cost-effective and long-lasting restorative material. However, it contains mercury, silver, tin and other metals. If it not properly handled during restoration or removal chances of its entry into the environment is more and pose threat to it. It can be avoided by using precapsulated dental amalgam material with amalgamator or using alternative restorative materials (i.e., composite resin, ceramic or other metal alloys) [4].

Radiograph processing solutions

In solution used for processing conventional x-ray films contains halogens, silver thiosulfate and other components. These components or their byproducts if entered into environment it will contaminate it. Another one of the common waste product in the dental office is expired films and they contains unreacted silver that can be toxic in the environment. Instead of disposing in the general waste, it has to be returned to the supplier for the safe disposal. In addition to these lead sheets present in the film pockets also a direct threat to the environment if it has not properly handled. All these problems can solved by using digital radiography. It helps in diagnosis, analyzing and reporting [5].

Some other things can be followed to make green dentistry more effective such as reducing usage of disposables items, using LED lights instead of incandescent bulbs, motion sensors for lighting purpose, solar panels and rechargeable



batteries can be used as alternative sources of energy and to avoid unnecessary wastage of paper, computer based recording and communication can be maintained. Proper bio-waste management protocol has to be maintained to handle clinical waste products [6]. The colour-coded bags will help to dispose the bio-waste proper manner. In discriminate usage of disinfecting material in clinics also poses a threat to the environment. These disinfectants are some of chemicals that are having tendency of killing or neutralizing microbes. If they spreading through the sewage and air they will contaminate the surrounding environment. Even though it is a COVID-19 pandemic period, precaution should be taken to avoid unnecessary usage of disinfection material [7].

To achieve the concept of green dentistry, dentist should adopt 3Rs (recycle, reduce and reuse) to prevent the highly excessive use of resources that are non-renewable. Green dentistry is a new and innovative dental practice type, which is environment friendly by reducing waste, conserving energy and decreasing pollution with the use of latest techniques [8].

Conclusion

Changing to the practice of green dentistry from existing conventional clinical practices needs several modifications in the regular protocols, investment and training of office, but considering the future of next generation it can be achieved by small, incremental steps and natural resources.

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Citation: Mahabob MN (2021) Role of a dentist in environment protection-A short communication. Int J Oral Craniofac Sci 7(1): 001-002.
DOI: <https://dx.doi.org/10.17352/2455-4634.000049>