Original Article

Quackery: The Appalling Parallel of Dentistry - An Indian Perspective

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Abstract

"Quack" has been defined by Random House Dictionary as "a fraudulent or ignorant person who pretends professionally or publically to have skill, knowledge or qualifications he or she does not possess." This unethical and unauthorized practice has its roots as deep as unemployment and poverty run in a developing country like India. Few factors like the exponential population growth further exacerbate these problems rendering inadequacy to many essential schemes and services. This article tries to trace back the menace of dental quackery to the grass root level suggesting the remedies to curb it successfully. It also highlights the detrimental effect of this unhygienic and crude practice on oral health and describes few prognostic indicators for the supporting teeth involving quack prosthesis through the eyes of prosthodontist.

Keywords: Dental ethics, Dental quacks, Quack dentistry, Street dentistry, Unethical dental practice.

Introduction

Dental quackery is a problem in India for decades. More prevalent in the rural and suburban areas, quackery is increasing at an alarming rate in urban areas as well.[1] The question is how is this unlawful and unethical practice growing and flourishing? The answer to this lies in the fact that majority of Indian population (70%) is residing in rural areas and a majority of the people are below the poverty line. Along with unequal distribution of population, in India the dentist: Population ratio is 1:10,000 in urban areas while it is as low as 1:2,50,000 in rural areas.[2] Population is one of the main causes for the inadequacy of dental services. In India, every year 12,000 dentists graduate from colleges with a dentist to population ratio of 1:15,713, while the World Health Organization (WHO) recommends dentist to population ratio of 1:7,500.[3]

The procedures performed by the quacks are extremely crude and they use unsterilized equipments for this malpractice. This lack of knowledge and required expertise often leads to many complications sooner or later, few of which like space infections might cause permanent impairment, while other infections like HIV, hepatitis B, etc. might go unnoticed and lead to fulminant infection in later years of life.[4] In some parts of India, especially in rural parts of Western Uttar Pradesh, it is seen that quacks visit villages on bicycle with instruments such as screwdrivers, dividers, used syringes, and pliers. This form of quackery is known as "street dentistry.[3]"

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Discussion

Dental quackery: Reasons and remedies

There are many reasons for the growth and flourishing of dental quackery, "poverty" being at the epicenter. The need for dental treatment is often neglected until the advanced stages when the pain becomes unbearable. The immediate dental attention at low costs or lack of knowledge and awareness coupled with inaccessibility to dentist leads to the growing demand of dental quackery catering, especially the medium-low socioeconomic strata. The misguidance form the peers as "the permanent and fix solution to all dental problems" further develops a sense of trust in the dental quacks. Naidu *et al.* reported that as high as 67% of the people in need of dental treatment visit dental quacks.[5]

Dental quackery can be curbed only if the Government of India, the Dental Council of India, the dental professionals, and the educated people join hands and work together in an organized manner. Survey needs to be carried out for knowing the exact reasons as to why people in a particular geographical area are

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inclined towards this mockery. On finding the underlying causes the local government authority can take the necessary measures to eradicate if effectively. Table 1 describes the reasons for the growth of dental quackery along with the recommended measures that can be taken to curb it respectively.

Medical council is discussing many policies of formally training and absorbing quacks to ensure basic facilities to the villages as the qualified doctors are not willing to migrate to villages. On the dental side, this possibility needs to be scrutinized carefully keeping in mind that the dental profession should not be undermined. Care needs to be taken not to motivate quack dentistry by making it legalized.[3] WHO recommends training dental licentiate, dental aid, frontier auxiliaries to promote dental treatment in rural areas.[6]

Table 1. Quack dentistry: Reasons(on the left) respective remedies(on the right)

Lack of accessibility to Dental treatment	• Relocation of Dental colleges in rural areas • Satellite dental clinic • Comprehensive oral health program (National Rural Health Mission) and oral healthcare delivery system. • Dental wing at Primary Health Care centres
Unemployment	• Development of infrastructure • Better job opportunities • Better connectivity to cities
Low dentist:population ratio	• Compulsory rural internship and educational fee concession for a student willing to practice in rural area after graduation. • Promising salary to dentist / waiving of government taxes in lieu of rural practice • Adoption of a rural village by a college to cater the dental requirements
Misguidance/ Fraud	• Strict laws and heavy penalties • Guidelines for new techniques and expertise required to practice them • Strict guidelines for hiring qualified dental assistants
Lack of awarness, illiteracy, misleading by peer	• Educational camps stressing importance of oral health, importance of early diagnosis, need for population control • Role plays, demonstrations, role modelling, Awarness through mass media • Inclusion of dental health in school syllabus.
Expensive dental treatment	• Cost cutting solutions by dentist • Dental insurance at low premium as government initiative and other government schemes • Half yearly dental checkup camps for early diagnosis hence decreasing the treatment cost. • Acceptance of other modes of payment other than fee for service
Long treatment time and multiple visits	• Four handed dentistry • Dental team approach

Government regulations

Jain has classified the oral healthcare providers in India into five categories.[7] The auxiliaries such as laboratory technicians, dental assistant, etc who are unauthorized and yet unlawfully practice dental procedures also have been designated as "dental quacks." Professional medical practitioners are also reported of practicing dental procedures which is out of the scope of their expertise.[7]

Section 49 (1) of the Dentist Act of India (1948) are the standards by which an individual can be designated as dental quack.[4] Quacks those who are unauthorized and untrained have inherited the art of dentistry from their ancestors while partially trained dental assistants and laboratory technicians acquire formal education and learn the techniques by observing the dental surgeon, later on starting their own practice at low costs.[7] The Chapter V, Section 49 of the Dentist Act of 1948 in India entails all dentists, dental mechanics, and dental hygienists to be licensed. Therefore, under this act, these quacks are succumbed to imprisonment and penalty.[4]

Clinical presentation of quackery through the eyes of prosthodontist

With the hope of getting an easy and quick remedy for their dental problems, many people often end up with botched procedures that are painful as well as destructive, often causing irreversible damage.[8] Not only are the restorative procedures attempted by quacks but also advanced procedures such as teeth whitening and alignment of teeth are being practiced. Chaudhary *et al.* reported a case of pulp exposure caused by 57% hydrogen peroxide given by quack to remove stains.[9] Another case was reported by Chalakka *et al.* in which in order to treat the proclination, two healthy anterior teeth of a child were capped by the metal crown.[10]

The malpractices carried out by quacks are crude, unhygienic and unethical that do more harm than good to the person. In India, many partially edentulous patients who visit quacks for getting fixed artificial teeth can be commonly seen with wires abruptly wound around the adjacent natural teeth. These "fix dentures" cause a lot of trauma to the periodontium as well as producing a lot of undue stresses leading to bone loss and eventually loss of the supporting teeth. No consideration is given for the length of the edentulous span. Frequently the wires are displaced subgingivally which later on act as a fertile ground for the growth of micro-organisms and food accumulation leading to gingivitis which if not treated may lead to periodontitis. Another way of fixing artificial teeth is seen in the form of ring plating i.e. inserting acrylic in between the natural teeth.[8]

Self-cure acrylic resin is most commonly used by quacks for fixed artificial teeth as well as restorative material in cavities on vital teeth irrespective of their dimensions. Self-cure acrylic used directly in the oral cavity leach out a lot of monomer which is a known carcinogen.[8] Self-cure acrylic resin sets by the exothermic reaction which may cause irreversible pulpitis if used as restorative material on vital teeth.[1] These attempted restorations violate many principles in dentistry leading to eventual failure.

In completely edentulous patients it is a common malpractice to use the suction disc in maxillary complete denture as means of added retention.[8] Usually placed in the anterior region of the hard palate, the use of suction creates negative pressure and not only causes bone resorption followed by perforation of the hard palate but also may lead to malignancy.[1]

In the wake of the COVID-19 crisis, many people have suffered financially. With many dentists only catering the emergency dental treatments, the dental quacks have seized the opportunity of attracting even the educated people to seek a dental remedy and have even attempted to complete the ongoing prosthodontic treatment.

All these manifestations of injury, inflammation of oral mucosa, mobility of teeth, gingival recession and bone loss, caries make the treatment plan quite cumbersome for the patient needing the attention of various dental specialties. It becomes a cumbersome procedure for the dentist to undo the wrong work done by the quack often requiring a team effort of multiple dental specialties.

Prognostic indicators for abutment teeth supporting a faulty prosthesis

Dental quackery not only undermines one's oral health but also violates the basic normative principles such as non-maleficence, beneficence, and justice. This baneful practice which is seen in many shapes and forms annihilates the periodontium and as well as weakens the tooth engaged by such unscrupulous prosthesis. It is therefore important to gauge the amount of trauma the teeth are subjected to and make necessary amends for a good dental prosthesis. The prognostic indicator is a simplified index that combines the clinical and radiographic findings introduced for the categorization of the amount of trauma borne by the individual tooth and the management of such trauma toward delivering a comfortable and long-lasting prosthesis.

The prognostic indicator is a tri-level approach comprising

a. Bleeding on probing (BOP)-gingival indicator
b. Clinical attachment loss (CAL)-periodontal indicator
c. Radiographic indicator-restorative indicator.

Each of these three indicators are to be used individually to score the values in relation to the traumatized teeth, the single highest score among which is to be considered and interpreted. The highest single score out of the three categories should be considered. When in doubt assign a higher score.

BOP - Gingival indicator

The amount of trauma caused by the faulty prosthesis varies and depends on number of factors of which "oral hygiene practices" and "time" play an important role. With less time elapsed, the trauma caused may be limited to the gingiva alone. The gingival indicator (Table 2) reveals the health of gingival tissue and can be evaluated by careful inspection and BOP.[11] For checking BOP use the periodontal probe and walk through the sulcus. Avoid application of excessive pressure in order to prevent deliberate injury to the sulcular epithelium and bleeding as a result of it.

Table 2: Gingival indicator (Source: H Loe. The gingival index the plaque index and the retention index systems J Periodontol 1967;38:610-616)

Score	Stage	Description
0	Healthy gingiva	Gingiva with well contoured and orange peel appearance
1	Mild gingivitis	Localized color change, oedematous marginal gingiva yet BOP absent
2	Moderate gingivitis	Red oedematous gingiva with bleeding on pressure
3	Severe gingivitis	Marked redness , ulceration, hypertrophy due to chronic irritation along with tendency of spontaneous bleeding

BOP: Bleeding on probing

Table 3: Periodontal indicator (Source: Flemming T.F. Periodontitis. Ann Periodontol 1999;4:32-37)

Score	Stage	Description
4	Mild periodontitis	<1–2 mm CAL
5	Moderate periodontitis	3–4 mm CAL
6	Severe periodontitis	≥5 mm CAL

CAL: Clinical attachment loss

Table 4: Restorative indicator

Score	Radiographic description
3	Radiolucency involving enamel or enamel and dentin
4	Radiolucency approaching or involving the pulp
5	Periapical changes suggestive of loss of vitality of the tooth
6	Coronal or radicular, proximal, cavitated caries rendering the tooth non-restorable

CAL - Periodontal indicator

The progression of gingivitis into periodontitis is a common occurrence endured by the teeth engaged by faulty prosthesis. CAL is the distance between the comento-enamel junction (CEJ) and the bottom of the gingival sulcus which is calculated as the difference between the probing depth (PPD) and the distance between the CEJ and the free gingival margin.[12] CAL measures the incidence as well as the prevalence of the amount of destruction caused to the periodontal ligament as well as the alveolar bone (Table 3).

Radiographic indicator - Restorative indicator

Food accumulation coupled with limited oral hygiene in inaccessible parts of a faulty prosthesis leaves a fertile ground for the growth of cariogenic micro-organisms resulting in irreversible damage sometimes rendering the tooth nonrestorable. Caries due to faulty prosthesis is most commonly seen on the surfaces of teeth underlying the prosthesis. Sometimes the vital teeth are sectioned abruptly and over which a faulty prosthesis is made. For the longevity of the prosthesis, it is important that the abutment teeth sufficiently resist occlusal forces (Table 4).

Score of 1–3 mild destruction of the abutment tooth structure and/or supporting gingiva indicative of restorative and/or oral prophylaxis followed by prosthodontic treatment

Score of 4–5: Moderate destruction needing root canal and/or periodontal flap surgery with or without bone grafting following a minimum of 2 weeks healing period before commencement of prosthodontic treatment. Splinting might be required.

Score 6: Severe destruction of the tooth structure and/or periodontium rendering the tooth unfit to be considered as abutment tooth for prosthesis.

Conclusion

Dental quackery is an unconventional, unhygienic, and unethical means of treating dental conditions which for the betterment of people need to be curbed. It is important to know why quackery in a particular region is prevalent in order to establish measures to uproot it from our society once and for all. The use and reuse of unsterilized equipments, lack of aseptic conditions predispose the people to many cross infections some of which, for example., HIV, Hepatitis B can be incurable or lethal. If not stopped, it is just a matter of time when these malpractices undermine national health.

Dentistry as a profession has come a long way to be considered as one of the most respected professions. It is our responsibility to protect this hard-earned reputation. This is a long battle that needs to be fought on many fronts simultaneously, with the Government of India and The Dental Council of India being at the forefront formulating and executing a strong policy to culminate this unethical practice. Along with stringent laws, their unbiased execution is essential. Ethical dentists should strive hard to break this symbiotic association of quacks over qualified practitioners.

References

1. Siwach P, Pawar VJ, Thakur A, Shaikh F. Havoc of dental quacks in a district in India: A case series. Indian J Dent Res 2020;31:323-5.
2. Hans MK, Hans R, Nagpal A. Quackery: A major loophole in dental practice in India. J Clin Diagn Res 2014;8:283.
3. Sandesh N, Mohapatra AK. Street dentistry: Time to tackle quackery. Indian J Dent Res 2009;20:1-2.
4. Reddy KV, Bansal V, Singh PK, Bhambal A, Gupta M, Gupta S. Perceptions regarding treatment by dental quacks and self-rated oral health among the residents of Bhopal city, central India. J Indian Assoc Public Health Dent 2017;15:84-8.
5. Naidu RS, Gobin I, Newton JT. Perceptions and use of dental quacks (unqualified dental practitioners) and self rated oral health in Trinidad. Int Dent J 2003;53:447-54.
6. Kumari S, Mishra SK, Mishra P. An evidence-based review on quackery in dentistry. BLDE Univ J Health Sci 2018;3:75-8.
7. Jain A. Dental quackery in India: An insight on malpractices and measures to tackle them. Br Dent J 2019;226:257-9.
8. Oberoi SS, Oberoi A. Growing quackery in dentistry: An Indian perspective. Indian J Public Health 2015;59:210-2.
9. Chaudhary A, Ingle NA, Kaur N, Nagpal A, Dhanker K. Footpath quacks. Br Dent J 2013;214:429.
10. Chalakkal P, Ataide Ide N, Krishnan R, Pavaskar R. Dental treatment abuse. J Clin Diagn Res 2014;8:1-2.
11. Loe H. The gingival index the plaque index and the retention index systems. J Periodontol 1967;38:610-6.
12. Flemmig TF. Periodontitis. Ann Periodontol 1999;4:32-7.