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## Quackery in Dentistry.

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### ABSTRACT

Quackery is a derogatory term used to describe the fraudulent misinterpretation of the diagnosis and treatment of the disease. Quackery is prevalent in dentistry due to lack of awareness about dentistry, high charges or unequal distribution of dentists. A quack could be a self styled expert, making himself out to be the director or president of an important sounding scientific society. But the quack differs from the ethical practitioner in that the quack's basic tools are incompetence and fraud. Many quacks are practicing on roadside as denturists and making money by fixing artificial teeth or extracted teeth as such on edentulous sites. It is high time for the dentists to tackle quackery both for the health of patients and save this prestigious profession.

**Keywords:** Quackery, street dentists, roadside denturists, Quackery in different Branches of Dentistry

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## Quackery in Dentistry

### Background:

Dentistry, like medicine, is a traditional, science-based, highly regulated health care profession that serves increasingly sophisticated and demanding clients. Today, traditional dental practice is dealing with an array of challenges to the established professional system; these challenges are generally termed “alternative” (or complementary, unconventional or integrative). Some unconventional practices may be viewed as “the continuity of traditions, religious beliefs, and even quackery that non-specialists practice”[1].

Quackery results when competent and trained practitioners are in short supply or when their charges appear prohibitive to a segment of the population. Then untrained individuals step in to supply a genuine need. The practice of quackery makes a mockery of dentists and dentistry. Quackery is a derogatory term used to describe the fraudulent misinterpretation of the diagnosis and treatment of the disease. A quack could be a self-styled expert, making himself out to be the director or president of an important sounding scientific society. But the quack differs from the ethical practitioner in that the quack's basic tools are incompetence and fraud [2].

Quackery has been defined as 'the fraudulent misrepresentation of one's ability and experience in the diagnosis and treatment of disease or of the effects to be achieved by the treatment offered [3]. Quacks are those who have observed and self learnt a few techniques of dentistry either by assisting dental surgeons or inherited it from their families and adopted it as a profession [4].

### History:

The history of dental quackery parallels that of medical quackery [1, 5]. This menace in practice dates back to the Indus Valley Civilization (IVC). The IVC has yielded evidence of dentistry being practiced as far back as 7000 BC. IVC sites in Pakistan indicate that this earliest form of dentistry involved curing tooth related disorders with bow drills operated, perhaps, by skilled bead craftsmen. It is said that the 17th-century French physician Pierre Fauchard started dentistry science as it is known today [5]. Dental quackery was abundant in the 19th century in Colonial America and British colonies such as Italy [2].

The quackery practice has been the choice of the lower socio-economic group even in the modern scientific world of today. Pakistan, China, Sri Lanka are few countries faced with the dilemma of quacks. India has been witnessing a sharp rise in the number of these so called street dentists who have been creating havoc by means of their unlawful practice especially in rural areas. Parts of Uttar Pradesh, Bihar, Haryana and Tamil Nadu are few states notorious for street dentistry. These itinerants open roadside clinics and perform procedures on the footpaths amidst the highly pathogenic environment [6].

**Reasons for quackery:** The various reasons behind quackery could be [7].

- Shortage of trained practitioners
- Expensive treatment plans provided by licensed dentists
- Absence of primary health care approach in dentistry
- Poor dentist –patient ratio in the rural population
- Lack of awareness.

Dentistry faces serious problems regarding accessibility of its services to all. The major missing link causing this unfortunate situation in a country like India is the absence of a primary health care approach in dentistry. Due to significant geographic imbalance in the distribution of dental colleges, a great variation in the dentist to population ratio in the rural and the urban areas is seen. At present, India has one dentist for 10,000 persons in urban areas and for about 2.5 lakh persons in rural areas.[8] It is often difficult for the poor urban and the rural population to get access to emergency care. Community oriented oral health programs are seldom found [9].

A number of factors may have contributed to its prevalence among dentists. These include: increased competition; advertising; higher costs for education and for opening a practice, diminished dental education in the methods of science, and the failure of organized dentistry to develop guidelines and policies for combating quackery. Some dentists with an entrepreneurial bent seem willing to embrace virtually any dubious practice that has profit-making potential. "Wellness" is something for which quacks can get paid when there is nothing wrong with the patient [10].

**Quackery and fraud are marked by clear and regular failure to meet any of these standards:** [11]

**Informed consent:** patients make free choices from among alternatives that are explained impartially in language they understand.

**Benefit and risk:** net expected benefit to patients must outweigh anticipated risks.

**Competence:** practitioners have the knowledge and skill expected by patients and the public to be able to produce results that meet the standard of care and the expectations created by dentists.

**Professional integrity:** practitioners maintain the trust patients and society have placed in the profession.

**Reasonable scientific base:** practitioners should be able to give reasons for their actions that are acceptable to their peers.]

**Table 1: Shows differences among Ethical, questionable and Quackery practice [11]**

<b>Categorizing Ethical Practice, Questionable Practice, and Quackery and Fraud</b>		
<b>Ethical Practice</b>	<b>Questionable Practice</b>	<b>Quackery and Fraud</b>
<b>Consequences</b>		
Improving the patient's overall oral health and well-being through means understood and approved by the patient, other dentists, and society	Placing the patient at risk for decreased overall oral health and well-being for the dentist's benefit	Damaging the patient's overall oral health and well-being, undermining the public's trust in dentistry as a profession, or breaking applicable laws
<b>Characteristics</b>		
Quality, patient-centered treatment within standard of care Innovative aspects of practice that meet the five standards of ethical practice Experimental practice (research) that meets Institutional Review Board standards	Performing procedures that the patient, other dentists, or society would not choose if well informed Performing procedures at marginal levels of quality or failing to provide necessary treatment Failure to take reasonable steps remain current in knowledge and skill and awareness of prevailing standards of care	Withholding or distorting relevant information about treatment options, probable outcomes, or history of previous outcomes from patients, colleagues, or society for personal gain Knowingly performing procedures that do not meet the standard of care
<b>Examples</b>		
Almost all established dental practices, those that remain on the leading edge through professional procedures development, approved research programs	Overtreatment, undertreatment, poor quality care, lack of comprehensive care, failure to diagnose, misrepresentation of patient benefits, failure to refer when case exceeds skill	Practicing without a license, practicing medicine or other health profession on a dental license, billing for procedures not performed, gross continuous substandard care, misrepresentation of one's qualifications, distorting the scientific basis of dentistry

**Common quackery practices in India** [6,7,10].

**Prosthodontics:**

- Acrylic dentures fixed on to the mucosa with commercial glues
- Single tooth crowns splinted with self curing acrylic on adjacent teeth
- Standard complete dentures given to every patient
- Extracted tooth is sometimes trimmed and fixed back into the socket with self-cure acrylic.
- Wires unsuitable and incompatible with the oral cavity are used to stabilize dentures.

- Dentures are fitted with suction discs as they lack proper retention and stability

**Oral pathology:**

- Pathology technician run laboratories without proper license
- Half baked knowledge of the technician can risk lives when he reads a slide of hematology or histopathology
- Inappropriate histopathology sections and faulty choice of stains can lead to faulty diagnosis
- Dental materials of spurious make are used
- Toothpastes or tooth cleaning powder used in rural areas contain tobacco, coal etc

**Orthodontics:**

- Fixed orthodontic treatments by non licensed practioners
- Retainers are not prescribed post fixed orthodontic treatment

**Pedodontics:**

- Extraction of carious first molar which leads to spaces loss in children

**Periodontics:**

- Flap surgeries without following norms of plaque control can lead to loss of attachment
- Unsterilized instruments can lead to iatrogenic infections

**Endodontics:**

- Adjacent class II cavities restored together as a single one
- Incomplete cleaning and shaping canals during root canal treatments(RCT), lead to periapical lesions.

**Oral surgery:**

- Transfusion without screening of blood
- Unsterilized syringes leads to spread of hepatitis B, HIV

**COMPLICATIONS**

These unwarranted procedures can lead to bone loss, adjacent tooth loss, infections and septicaemia. The other major complications that arise from procedures carried out by these untrained unethical personnel are oral cancer, space infections and even death due to widespread infections. These can also serve as a possible portal of transmission of Hepatitis B, C, and HIV/AIDS which are blood borne diseases and a major risk factor with unsterilized methods they practice [6].

A survey conducted by IMA (Indian Medical Association) shows that the number of quacks in our country exceeds the number of doctors. Even if one quack causes the death of one patient in one year due to wrong diagnosis and treatment, nearly 2.5 million silent murders take place across the country. Quacks had been administering high doses of drugs with no knowledge about them and had been more active during epidemic outbreaks [12].

A large chunk of Indian population still depends upon quacks for fulfilling their health needs. These quacks mostly prescribes unlabelled, non-standardized and open medications in the form of powders, posing health hazards. One of the study has shown the constituents of these kinds of medications and to ascertain their adverse effects. Common chemicals used to prepare these powders ranged from sildenafil, testosterone, betamethasone, theophylline and amphetamines to opioids [13].

In a case report by Chaudhury A, many patients visited their hospital with excruciating pain in the teeth. They gave a history of using a liquid thrice daily for two months for removal of stains and whitening of teeth after which the teeth were free of staining but also had exposed pulps. Chemical analysis revealed that the liquid consisted of 57% hydrogen peroxide, a concentration not recommended for dental treatment. Hydrogen peroxide has the potential to affect dental enamel because of its acidic pH.5 [14].

Another patient was referred to M.S. Ramaiah dental college (2002) by a private dentist with a denture prosthesis along with a suction disc for retention purpose. Patient gave a history of chronic non healing ulcer in the area covered by suction disc. Biopsy report of the suspected lesion revealed oral cancer [6]

A case of quackery and obsession for diastema resulting in avoidable endodontic therapy was reported by Arigbede AO, Adesuwa AA (2012). A 23-year old lady presented with history of spontaneous, sharp, persistent pain associated with palatal swelling and discharging sinus of two weeks duration in relation to maxillary central incisors (11, 21). The complaint was preceded by a history of recurrent pain in relation to 11, 21, 31 and 41 which started soon after obtaining artificially created maxillary and mandibular midline diastema from a dental quack. Periapical x-ray revealed periapical radiolucency in relation to 21 and 41. Vitality test confirmed necrotic pulp in the lower central incisors. The affected teeth were scheduled for root canal therapy (RCT) and porcelain fused to metal crown. The RCT of 11 and 21 had been completed but further treatment stalled due to financial constraint. This is a case of obsession for midline diastema, poor dental health education, and illegal dental practice [15].

A case of self styed fixation of traumatic maxillary anterior teeth reported in Department of conservative dentistry, dental college AMU, Aligarh [16].

**MENANCE OF QUACKS:** Dentistry involves physical procedures with inherent risks of complications. Somewhere the situation or dentists are responsible for it. In light of this fact, quackery can be harmful physically, psychologically, emotionally and financially because of the treatment itself or because of the failure to get the treatment that might be helpful, or because of the resultant confusion. From a public health stand point, quacks cater to the lower middle and lower socio-economic classes that qualified dental practitioners do not. A large number of people visiting these quacks seek care only in pain; have a restricted budget and are not very quality conscious. Yet another shameful act on the part of those qualified dental surgeons who give their degrees to quacks for displaying in their clinics on a mutually agreed upon monthly payment, thereby giving legitimacy to the quackery at the cost of poor and low-income group patients. Another shocking aspect that has, of late, surfaced pertains to promoting quacks and unqualified doctors by some television channels. Quacks, unqualified doctors and even those running their beauty parlours and the so-called beauty clinics, who are invited to TV talk shows, could be seen and heard prescribing medicines for all the diseases whether it pertains to hypertension, diabetes, skin and tooth-related problems [17].

**Anti Quackery Laws:** In India, under Chapter V, Section 49 of the Dentist Act of 1948 requires dentists, dental mechanics, and dental hygienists to be licensed. These street doctors can be penalized under The Dentist Act leading to imprisonment & penalty but strict laws need to be reinforced and implemented [18].

**How to tackle Quackery?:** Most people think that quackery is easy to spot. Often it is not. Its promoters wear the cloak of science. They use scientific terms and quote (or misquote) scientific references. Talk show hosts may refer to them as experts or as "scientists ahead of their time" [19]. In the field of dentistry, these matters of quackery need to be carefully analyzed. Whether these street dentists can be legally trained with minor first-aid procedures should be given a serious thought. The World Health Organization suggests of having New Dental Auxiliaries like dental aid, dental licentiate, and frontier auxiliaries with little training to work in rural remote areas [20]. Until the Government intervenes, takes them into the health system, and provides a stable means of income, there are more chances that the quacks may thrive to earn money by practicing quackery [21]. The best defense against quackery is an understanding of how scientific knowledge is developed and verified. Dental education should include instruction on the scientific method and the detection of quackery [22,23].

The other ways of increasing the accessibility to quality professional care for the rural areas should also be seen upon. The Government should urge fresh graduates to practice in rural areas and provide more incentives to them. The public health dentists should take the initiative of adopting more community oriented

oral health programs to increase the awareness among rural population. Dental colleges can have peripheral centers in the rural areas and even adopt some villages or PHCs where they can visit regularly to provide care to the needy and educate rural masses. A compulsory rural posting of around three to six months for the interns would certainly benefit millions of deprived people in rural areas [19].

#### Measures To Be Undertaken [6].

- Improvisation of infrastructure and sanctioning of funds in government hospitals
- Mobilization of qualified doctors to rural areas
- Constant surveillance
- Stringent anti quackery laws

#### CONCLUSION

The future of quackery depends on the symbiosis of quacks and dental practitioners. The quicker the symbiosis is halted and the quicker rational quality care be made universally available, the faster will the address be issued. Dentistry has come a long way in the last century and a half, to the point where today it is ranked as one of the most respected of professions. It is incumbent upon dentists everywhere to protect that hard-earned reputation by weeding out quacks from among them, and to consign to the dustbin of history the shady and nefarious practices of the past.

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