

## Dental Negligence Among Patients Residing in Kathmandu Valley, Nepal

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### ABSTRACT

Dental malpractice is described as medical malpractice for an injury due to negligent dental work, failure to diagnose or treat possible precancerous oral conditions, delayed diagnosis or treatment of oral disease or other precancerous oral conditions, as well as any malevolent or otherwise intentional misconduct on the dental professional's part. Patients' complaints about dental treatments are increasing internationally. In Nepal there are no documented patient's complaints about dental malpractice. However, there are many encounters with the faulty dental treatments during clinical practice. The purpose of this study is to describe the number and character of dental negligence. A total of 376 patients who attended the department of Oral Medicine and Radiology in one of the teaching hospital in Kathmandu valley and had undergone dental treatments/examinations at least once before in any health care centers or medical camp were included in the study. Demographic data and past dental history were recorded using questionnaires. Faulty treatments which were found during oral examination of the patients were recorded. Out of 376 cases, 103 (27.4%) had errors or mistakes in previously done dental treatments. Majority of the errors were in Restorative dentistry (42.99%), Endodontics (18.42%), Prosthodontics (11.4%), Oral Medicine and Radiology (9.64%), Patient education (8.78%), Oral surgery (6.14%) and Pedodontics (2.63%). Higher percentage of cases (48.2%, n=55) of dental negligence were carried out in private clinic. Health professionals mostly involved in dental negligent cases were general dentist (79.83%, n=91). A higher prevalence of dental errors was found in this study. Dental professionals can utilize the knowledge about the errors and can reconsider their professional skills.

**Keywords:** Dental negligence, Dental professionals, Faulty treatments, Restorative dentistry.

### INTRODUCTION

The legal definition of dental malpractice varies between different countries. However, a general description of dental malpractice that is consistent among countries would be described as medical malpractice for an injury due to negligent dental work, failure to diagnose or treat possible precancerous oral conditions, delayed diagnosis or treatment of oral disease or other precancerous oral conditions, as well as any malevolent or otherwise intentional misconduct on the dental professional's part.<sup>1</sup> Negligence is generally defined as conduct that falls short of a standard. Faulty treatment is the failure of a planned treatment to be completed as intended or the use of a wrong treatment plan to achieve an aim. Complaints from patients about dental treatment are on the increase internationally as in USA, UK.<sup>2</sup> American Dental Association found that the number of dentists reporting at least one filed claim ranged from 27 per 1000 dentists in 1999 to 40 per 1000 dentists in 2003.<sup>1</sup>

Most of the medical or dental disputes are resolved by means of an out-of-court settlement and compensated by the involved hospital or the health professionals. Many

patients are also not aware of dental malpractice. Besides that, the legal process is complicated. Because of these reasons, the malpractice claims are very few in number.

In our country, District Compensation Committee located in each of the 75 districts of the country entertains primary jurisdiction to receive complaint within 35 days regarding medical negligence and decide in relation to compensation. Dissatisfied party may appeal against the decision of the Compensation Committee before the concerned Appellate Court within 35 days. The Committees lack relevant expertise to decide on medical negligence issue because of its bureaucratic composition instead of technical personnel as required by the nature of dispute.<sup>3</sup>

The official body whose expert opinion needs to be taken in medical/ dental malpractice is Nepal Medical Council. The NMC has in accordance with the Nepal Medical Council Act 1964, passed a medical Code of Ethics, which all doctors registered under it, is to abide by. Since there is no separate dental council, all dentists are registered under NMC and should always follow the NMC rules and regulations, which regulate the practice of medicine. She or he should also abide by other laws enforced in the country.

There are certain kinds of professional misconduct and criminal offences, which lead to disciplinary proceedings or which in the opinion of the NMC, could give rise to a charge of serious professional misconduct. In accordance with the Nepal Medical Council Act and Regulations, NMC will form professional conduct and health committee, which will then recommend the gravity of conviction to NMC. The committee will initially enquire all the complaints and issues related to professional misconduct. At the conclusion of any inquiry regarding professional misconduct, the committee will decide the level of punishment according to the severity of misconduct. (NMC act 2020)<sup>4</sup>

In Nepal there are no documented patient’s complaints about dentists although it has been acknowledged that some complaints do exist which sometimes are printed in news papers. However, there are many encounters with the faulty dental treatments during clinical practice. The purpose of this study is to describe the number and character of dental negligences. This study describes the prevalence of faulty dental procedures among patients who had visited any health center or health camp and attending Department of Oral Medicine and Radiology in a teaching hospital.

**METHODOLOGY**

After approval from KIST Institutional Review Board, a cross sectional study carried out in the Department of Oral Medicine and Radiology, for a time period of 3 months (1/11/2014 – 1/2/2015). A total sample size of 375 was calculated. A total of 375 patients who attended the department of Oral Medicine and Radiology and had undergone dental treatments or dental examinations at least once before were included in the study at least once before in any health care centers or medical camp were included in the study. After taking informed consent, a questionnaire was delivered among the patients. Faulty treatments which were encountered while performing oral examination of the patients were also recorded. Data analysis was done using SPSS 21 version. Prevalence of dental errors was calculated. The frequency of different specialties involved, frequency of dental professionals involved and the place of treatment were also calculated.

**RESULT**

This is the first study to present information on prevalence of common dental errors, mistakes or negligences among the patient of Nepalese population. Many dental mishaps are encountered during oral examinations and patients also present to the OPD with complaints of dental treatment failure repeatedly. In such cases, dentists face legal action. Most of the patients in Nepal are unaware of their rights. The complaint process is complicated. Hence, there are very few patients complaints against dentist.

The mean age of the patients participating in this study was 36.01±16.88 with a range of 2 to 82 years. Two hundred and fourteen (56.9%) of the participants were male and 162 (43.1%) were female. Most of the patients were from Lalitpur district where this dental hospital is located (Table 1).

**Table 1:** Demographic characteristics of patients attending department of Oral Medicine and Radiology

| Variables               | Male          | Female        | All           |
|-------------------------|---------------|---------------|---------------|
| Mean age (years)        | 37.30 ± 18.37 | 35.03 ± 15.63 | 36.01 ± 16.88 |
| Gender N(%)             | 162 (43.1%)   | 214 (56.9%)   | 376 (100%)    |
| Lalitpur                | 105 (64.8%)   | 158 (73.8%)   | 263 (69.9%)   |
| Kathmandu               | 29 (17.9%)    | 37 (17.3%)    | 66(17.6%)     |
| Bhaktapur               | 7 (4.3%)      | 5 (2.3%)      | 12 (3.2%)     |
| Out of Kathmandu Valley | 21 (13.0%)    | 14 (6.5%)     | 35 (9.3%)     |

In this study, out of 376 cases, 103 (27.4%) had errors or mistakes in previously done dental treatments. Some patients had multiple errors in their oral cavity. Majority of the dental errors were in Restorative dentistry (42.99%). It was followed by Endodontics (18.42%), Prosthodontics (11.4%), Oral Medicine and Radiology (9.64%), Oral and Maxillofacial surgery (6.14%) and Pediatric Dentistry (2.63%). In 8.78% of the cases, patient had suffered due to inadequate counseling, wrong counseling or poor information. Such types of negligence were categorized in the Patient Education Department. (Table 2)

**Table 2:** Prevalence of dental negligence in clinical and non clinical cases

| Specialities                   | No of cases (%)  |
|--------------------------------|------------------|
| Restorative Dentistry          | 49 (42.99)       |
| Endodontics                    | 21 (18.42)       |
| Prosthodontics                 | 13 (11.4)        |
| Oral Medicine and Radiology    | 11 (9.64)        |
| Patient education              | 10 (8.78)        |
| Oral and Maxillofacial Surgery | 7 (6.14)         |
| Pediatric Dentistry            | 3 (2.63)         |
| Periodontics                   | 0 (0%)           |
| Orthodontics                   | 0 (0%)           |
| <b>Total</b>                   | <b>114 (100)</b> |

The major causes of complaints per disciplines were recorded as follows:

Restorative dentistry: Faulty restorations like high points, improper proximal contact, inadequate marginal ridge, under filled cavities were the most common mistakes that were found in restorative dentistry (89.8%, n=44). Improper cavity design was found in 8.16% (n=4) of the cases. (Table 3)

**Table 3:** Common negligences in Restorative Dentistry, Endodontics and Prosthodontics

| Errors in Individual Departments                                   | Frequency (%)   |
|--|-----------------|
| Errors in RestorativeDentistry                                     |                 |
| Faulty restoration   | 44 (89.8)       |
| Wrong treatment modality (DCM/ RCT)                                | 1 (2.04)        |
| Improper cavity design   | 4 (8.16)        |
| <b>Total</b>   | <b>49 (100)</b> |
| Errors in Endodontic   |                 |
| Faulty endodontic procedure (over/ under obturation, condensation) | 16 (76.2)       |
| Inadequate endodontic procedure                                    | 5 (23.8)        |
| <b>Total</b>   | <b>21 (100)</b> |
| Errors in Prosthodontic  |                 |
| Faulty FPD   | 5 (38.46)       |
| Faulty RPD   | 6 (46.15)       |
| Fixed denture  | 2 (15.39)       |
| <b>Total</b>   | <b>13 (100)</b> |

Endodontics: the technical errors like overobturation, underobturation, inadequate gutta-percha condensation were commonly found in the Department of Endodontics. (Table 3)

Prosthodontics: Faulty acrylic gum stripper which was fixed in the oral cavity with help of metal clasp has become a common practice among unqualified dental professional in Nepal and it was found among 46.15% (n= 6) of the cases of Prosthodontics. Errors in fixed partial dentures was also found in 38.46% (n = 5) cases. In 15.39% (n=2) cases, the patients were not advised to remove the dentures from mouth so it was kept inside the oral cavity resulting in severe candidiasis. (Table 3)

Oral Medicine and radiology: failure to diagnosis was found in 72.7% (n=8) of the cases. In 27.3% (n= 3) wrong medications were prescribed. Pedodontics: there were 3 pedodontics cases where the errors occurred. Faulty restorations and wrong medications prescription were found among those cases. Patient education: In 8.78% of the cases, patient had suffered due to inadequate counseling, wrong counseling or poor information. Such types of negligences were categorized in the Patient Education Department. No cases of errors were found in the Department of Periodontics and Orthodontics.

A percentage of 48.24 (n=55) cases where dental negligences were seen was carried out in private clinic followed by hospital (38.60%, n= 44), polyclinic (9.65%, n=11), and others (e.g. camp, pharmacy, primary health centers) (3.51%, n=4). (Table 4)

**Table 4:** Place of Treatment

| Place of Treatment | Number (%)       |
|--------------------|------------------|
| Hospital           | 44 (38.60)       |
| Private clinic     | 55 (48.24)       |
| Polyclinic         | 11 (9.65)        |
| Other              | 4 (3.51)         |
| <b>Total</b>       | <b>114 (100)</b> |

Health professionals involved in dental negligent cases were general dentist (79.83%, n= 91), specialist (2.63%, n=3), dental hygienist (2.63%, n=3), quack (1.75%, n=2), pharmacist (1.75%, n=2), dental technician (0.87%, n=1) and medical doctor (0.87%, n=1). In 7.9% (n=9) of the cases the patient was not sure of the designation of the health professional. (Table 5)

**Table 5:**Type of professional carrying out the treatment

| Type of professional | Number (%) |
|----------------------|------------|
| General dentist      | 91 (79.83) |
| Specialist           | 3 (2.63)   |
| Dental hygienist     | 3 (2.63)   |
| Dental technician    | 1 (0.87)   |
| Quack                | 2 (1.75)   |
| Anyother             | 2 (1.75)   |
| Pharmacist           | 2 (1.75)   |
| Don't know           | 9 (7.90)   |
| Medical doctor       | 1 (0.87)   |
| Total                | 114 (100)  |

## DISCUSSION

This study is the first attempt to present the prevalence of dental errors among patients who had undergone oral health examination and treatment in Nepal to our knowledge. People are now more aware of their oral problems and seek for dental treatments unlike previous days when the treatment of choice for any dental pain or decay for most of the patients was used to be extraction. As the demand in oral health is increasing, many dental clinics and dental hospitals are also increasing. Likewise many people choose dentistry as their profession. These factors have resulted in an increase number of treatments provided. These increased treatments have increased the risk of malpractice especially from the complex case situations.<sup>2</sup> In this study we did not distinguish between mistakes, negligence and legal offences (MNLOS). This is because some MNLOS can be regarded as mistakes or negligence depending on the circumstances. For example, breaking an instrument inside root canal can be regarded as negligence if instruments are not replaced regularly, while the breaking of a new instrument may occur by mistake.<sup>5</sup> The data in this study do not enable differentiation between these cases. The errors which were found in this study were discussed with the expert/specialist before recording them as errors or mistakes.

Out of 376 cases, 103 (27.4%) cases had errors or mistakes in previously done dental treatments. Some patients had multiple errors in their oral cavity. Among them 17.8% (n=67) came to the OPD with the chief complaint related to the error. For example, patient came with the complaint of pain in the root canal treated tooth. When examined with Intra Oral Periapical Radiograph, underobtured root canals were found. While remaining patient with errors (n=36) were not aware of the adverse condition of their dental treatments.

Majority of the dental errors were in Restorative dentistry (42.99%). Previous studies where dental malpractice claims were taken into account, majority of the errors were in oral surgery and fixed prosthodontics.<sup>1,2</sup> In a study performed in UK majority of the errors were in restorative dentistry which resembles the result with our study.<sup>2</sup> The higher frequency of mistakes in restorative dentistry could be because the restorative treatment of teeth is gaining more popularity nowadays in Kathmandu valley after extraction. The more the treatment, the more will be the chances of error. Next most commonly occurring errors were found in the department of Endodontics. Previous studies also show that endodontic claims are the second most common type of claim in dental profession.<sup>5</sup> A percentage of 11.4 cases had errors in department of Prosthodontics. This high frequency of errors could have been resulted from the fabrication of prosthesis by dental technician or dental hygienist, or quack without supervision of dentist. Next commonly occurring errors were in the department of Oral Medicine and Radiology (9.64%). Cases like wrong diagnosis and incorrect medication were recorded under this department. This high numbers of errors could be because most of the patients go to pharmacist for any dental pain, swelling or oral ulcer.

Among the errors, 6.14% were of Oral Surgery. In more than half of the oral surgery cases, (57.14%), root pieces were remaining after surgical extraction leading to the infection. Patients were not aware of the remaining root pieces in their socket. In some cases, prosthesis was not advised to the patient after extraction which has resulted in inadequate space or space closure for further prosthesis. A percentage of 2.63 were that of pediatric cases. Incorrect dose of antibiotic and faulty restorations were common in pediatric cases. There were no cases of errors in the department of Orthodontics or Periodontics. Since our study population were, patients attending the Oral Medicine and radiology department in a teaching hospital who has already visited the dentist or have undergone oral examination at least once before, mostly, irreversible errors or mistakes could only be documented. This could be the reasons for relatively less cases in pediatric dentistry or no cases in Periodontics or Orthodontics.

Most of the errors were carried out in private clinic which resembles the study carried out by Ozdemir MH *et al.*<sup>6</sup> More than 75% of the errors were committed by general dentist. This could be because of patients' assumption that people wearing white apron and performing oral procedure are general dentist. Data regarding, place of treatment and type of

professionals carrying out the treatment were recorded based on the report given by the patient. There could be higher rates of mistakes as it was based on report given by the patients.<sup>7</sup>

Under the legislation of Nepal Medical Council, only dentist can perform dental treatments inside the oral cavity of dentist except supragingival scaling which can be carried out by dental hygienist. If a dental technician performs dental treatment on a patient, he/she will face legal responsibilities like in other countries.<sup>6</sup> The findings in this study indicate that unqualified dental professionals are performing many dental procedures leading to compromised oral health care. In some cases it can be argued that the operators were incompetent to perform the procedures and did not know the limitations of their abilities. However, it is also highly conceivable that "advanced" procedures that render high monetary returns are attempted by some general dental practitioners to improve their profitability, and to build their reputations as superior clinicians who can perform complicated procedures.<sup>8</sup>

Researches on dental care system, the services and utilization are very important. They will evaluate the functions of the dental service. It may also be important to record how a system deals with its failure. For dental service, such failures might be represented by patients complaints against dentists concerning malpractice, negligence, etc.<sup>9</sup>

## CONCLUSION

This study shows that dental treatment errors are occurring in higher prevalence, and if ignored, will continue in future. Regular publication of such data would be helpful for dental professionals to know about the frequent errors that could occur during their clinical practice and will allow them to reconsider their professional skills. This study was done in a smaller sample size over a short period time. Further nationwide studies are needed for more information on this field.

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