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Research Paper

Pattern of Demand for Endodontic Treatment In A Nigerian Teaching Hospital

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ABSTRACT
Background: Tooth preservation is the ultimate goal of modern dental care and root canal therapy/treatment (RCT) is an available therapeutic strategy to retain teeth.
Objective: To determine the pattern of demand for endodontic treatment among patients attending a teaching hospital in South-east Nigeria.
Methodology: A retrospective review of the hospital records of patients who attended Endodontic unit of the Department of Restorative Dentistry, University of Nigeria Teaching Hospital, Enugu State, Nigeria from January 2016 to December 2016 was done.
Results: A total of 119 patients had endodontic treatment, 46(38.7%) were males,73(61.3%) were females giving a male to female ratio of 1:1.6. The age range of the patients was 17 to 68 years with a mean age of 32.7 ± 12.3 years. The highest demand for root canal therapy (39.6 %) was found in the 20-29 years age group. The total number of teeth treated was 133, maxillary teeth (57.9%) were more treated than mandibular teeth (42.1%) and more posterior teeth 101 (75.9%) were treated than anterior teeth.
Conclusion:. There was a greater demand for root canal treatment among female. Endodontic treatment was mostly completed in multiple visits and more on the right side of the dental arch.

Key words: endodontic treatment, pattern, demand

I. INTRODUCTION

Endodontic treatment also known as root canal treatment or therapy (RCT) is a procedure aimed at retaining the teeth in form and function, Loss of tooth or teeth due to periodontal disease, dental caries, trauma or some genetic disorders, affects not only basic mouth functions but aesthetic appearance and quality of life [1]. Tooth loss or absence is a common condition that can result from numerous pathologies such as periodontal and carious diseases, fractures, injuries or even genetic alterations [2]. Tooth preservation is the ultimate goal of modern dental care and root canal therapy/treatment (RCT) is an available therapeutic strategy to retain teeth [3]. In a developing country like Nigeria, there is increasing dental awareness with more people desiring to keep their teeth [4].

The reasons for prescribing endodontic treatments are mainly related to complications of dental caries [5-8]. It is performed on most teeth with irreversibly damaged pulp and/or with periradicular lesions. The irreversible pulpal damage and subsequent pulpal necrosis may be as a result of caries, trauma, and iatrogenic damage during dental procedures. It may also be carried out on endodontically healthy teeth for elective reasons .Endodontic treatment can be single visit or multiple visits. Studies have shown that most clinicians complete their RCT in multiple visits.[9-11] Reports have shown that toothache and dental abscess were the commonest complaints given by patients demanding for RCT [7,12]. In previous studies, the most frequently treated teeth were maxillary molars and premolars while the mandibular [7.13] incisors were the least treated . In addition, females are reported to show higher prevalence of root treated teeth [7,13-14] . There are various studies on the pattern of demand for endodontic treatment in Nigeria. The aim of this study is to determine the pattern of demand for endodontic treatment among patients attending a teaching hospital in South-east Nigeria and compare findings with published reports from other parts of the country and other countries of the World. It would also contribute to the existing data on the pattern of demand for endodontic treatment in Nigeria and the West African sub-region.

II. MATERIAL AND METHODS

A retrospective review of the hospital records of patients who attended and had RCTs done in Endodontic unit of the Department of Restorative Dentistry, University of Nigeria Teaching Hospital, Enugu State, Nigeria from January 2016 to December 2016 was done. University of Nigeria teaching hospital is a tertiary health facility serving many local government areas of Enugu State and neighbouring States. The demographic and clinical data, such as age, sex, tooth treated and treatment provided were retrieved from the patients' records and analyzed using SPSS version 20. Medical records with incomplete data were excluded. Ethical clearance for this study was sought from Ethical Committee of University of Nigeria Teaching Hospital, (HREC, UNTH) Enugu, and obtained before commencement. Data were analysed using a computer software programme, Statistical Package for Social Sciences (SPSS) Version 20. P values < 0.05 were accepted as being statistically significant.

III. RESULTS

A total of 119 patients had endodontic treatment ,46(38.7%) were males,73(61.3%) were females giving a male to female ratio of 1:1.6 The age range of the patients was 17 to 68 years with a mean age of 32.7 ± 12.3 years. The highest demand for root canal therapy (39.6 %) was found in the 20-29 years age group, this was followed by the 30-39 years age group. The 60-69 year age group had the least number of patients as shown in Table 1.The total number of teeth treated was 133, maxillary teeth (57.9%) were more treated than mandibular teeth(42.1%) , More posterior teeth 101 (75.9%) were treated than anterior teeth 32 (24.1%) as shown in Table 2. The molars 62 (46.6%) were the most endodontically treated teeth[first molar], followed by the[second premolar] premolars 39(29.3%).Endodontic treatment was mostly completed in multiple visits and more on the right side of the dental arch. **Figure 1**

TABLE 1: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF PATIENTS

Variable	Number	Percent
Gender		
Male	**46**	**38.7**
Female	**73**	**61.3**
Age group(yrs)		
10-19	**11**	**9.2**
20-29	**47**	**39.6**
30-39	**32**	**26.9**
40-49	**15**	**12.6**
50-59	**11**	**9.2**
60-69	**3**	**2.5**
	119	**100**

Table 2 Endodontically treated teeth of the patients

Variable	Number	Percent
Maxillary teeth	**77**	**57.9**
Mandibular teeth	**56**	**42.1**
	133	**100**
P-value= 0.518		
Anterior teeth	**32**	**24.1**
Posterior teeth	**101**	**75.9**
Incisors	**31**	**23.3**
Canine	**1**	**0.8**
Premolars	**39**	**29.3**
Molars	**62**	**46.6**
	133	**100**
P-value = 0.492		

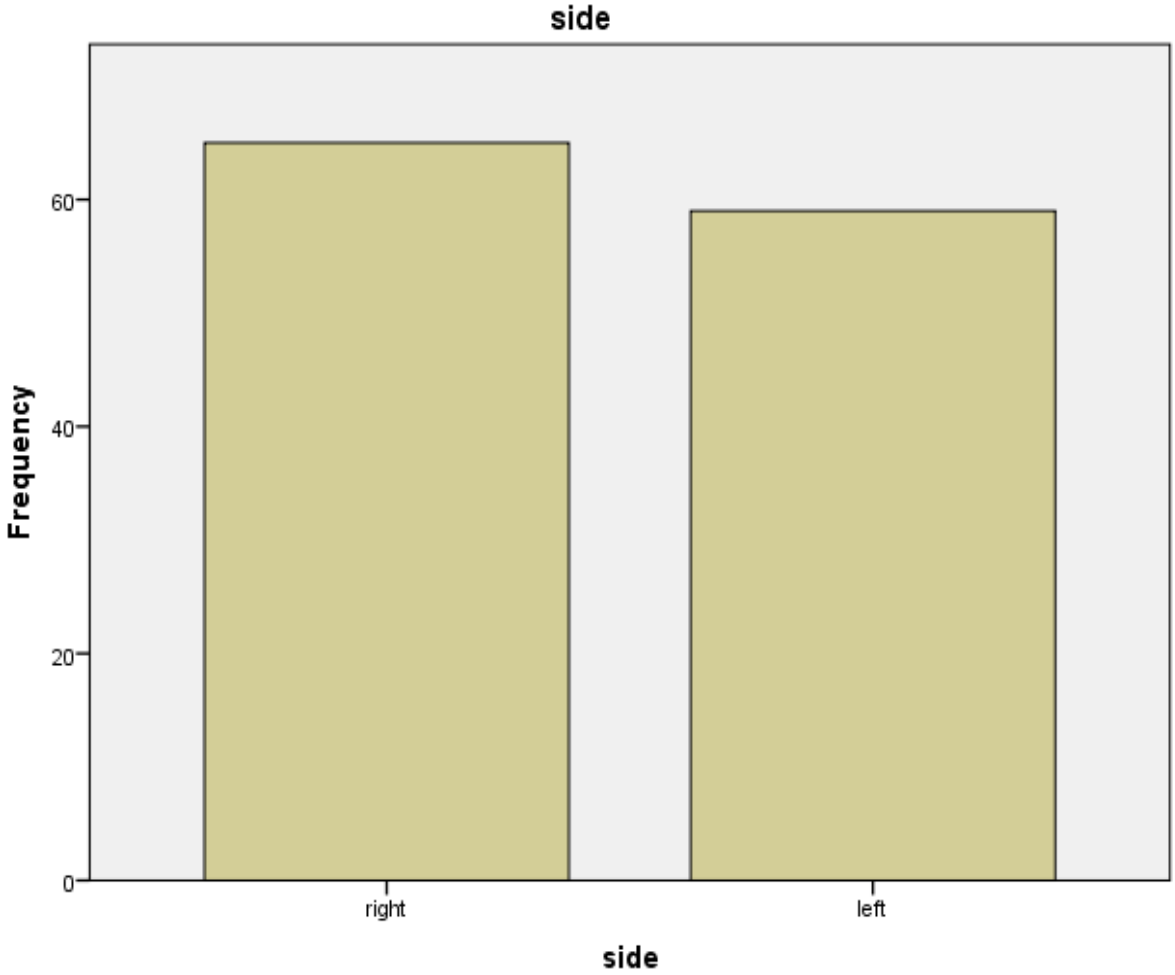

Figure 1 : Side of the dental arch where endodontic treatment were done

IV. DISCUSSION

Females had been reported to be more concerned about their oral health; hence they appeared to be better motivated to demand for oral health care [13-15] . In this study, the demand for endodontic treatment was higher in females and this correlate with previous reports [3,13-18] The greatest percentage of patients that received endodontic treatment during the study period was in the 20-29 years age group and was in agreement with previous study[3,19] Root canal treatments were done more in maxillary teeth than mandibular teeth in our study. This pattern was in agreement with previous reports [3,20-21] . Another finding is that more posterior teeth were treated than anterior teeth and is in agreement with previous studies[5-8,12,18,20] The most predominant indication for RCT in this study was acute apical periodontitis (AAP) followed by irreversible pulpitis, both sequalae of dental caries as in other studies [3,6-8,12,18] Endodontic treatment was mostly completed in multiple visits and more on the right side of the dental arch.

V. CONCLUSION

There was a greater demand for root canal treatment among females, maxillary teeth were more treated than mandibular teeth, posterior teeth were more endodontically treated than anterior teeth and the treatments were mostly completed in multiple visits and on the right side of the dental arch.

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Conflicts of interest
There are no conflicts of interest.

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