Original Article

A Survey on Awareness, Knowledge, and Attitude toward NICE Oral Cancer Referral Guidelines among General Dental Practitioners in Edo State

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Abstract

Background: The NICE oral cancer referral guidelines (NICE OCRG) are yet to be adopted in Nigeria. The level of awareness, knowledge, and attitude among general dental practitioners (GDPs) in Nigeria toward NICE OCRG is evaluated. **Materials and Methods:** A self-administered questionnaire was used to collect information from GDPs in Edo state on the awareness, knowledge, and attitude toward the NICE OCRG. A total of 83 respondents participated in the study. Data collected were analyzed and presented in descriptive and tabular forms as numbers and percentages. The study was analyzed using Statistical Package for Social Sciences (SPSS) version 21 (IBM, USA). **Results:** The male-to-female ratio was 1.4:1.0. The mean age was 33.3 ± 5.30 years, with age range from 21 to 50 years. Nearly 63.9% of the respondents were found to have heard of the NICE OCRG, of which 43.4% had their source from the Internet. Most of the respondents (n = 43, 51.8%) had fair knowledge of OCRG followed by those with good knowledge (n = 25, 30.1%) and those with poor knowledge of OCRG (n = 15, 18.1%). Overall 55.4% of the respondents agreed that the NICE OCRG will help reduce diagnostic delay and false-positive referral of oral cancers if adopted in Nigeria. Furthermore, 77.1% of the respondents were willing to implement the NICE OCRG if adopted in Nigeria. **Conclusion:** The awareness and knowledge of the NICE OCRG among GDPs in Nigeria is encouraging, and most of them had favorable attitude toward the NICE OCRG. There is a clear need to adopt the NICE OCRG in Nigeria to reduce diagnostic delay and false-positive referral of oral cancers.

Keywords: Attitude, awareness, general dental practitioners, knowledge, NICE oral cancer referral guidelines

Introduction

Oral cancer is still a leading cause of morbidity and mortality all over the world and even in our environment.[1,2] This level of mortality more often than not is due to late-stage presentation for specialist care.[3,4] Early referral and diagnosis is highly necessary to improve survival and reduce diagnostic delay.[3] Over the years, studies have been done on the extent of delay between when a patient first notices a lesion to when he/she is seen by a health-care professional and then eventually being referred for specialist care, and it has been found to be longer than necessary.[4,5] Hence, there is a need to integrate referral guidelines into our day-to-day practice.

The introduction of oral cancer referral guidelines (OCRG) for suspected cancer cases is an all important step toward ensuring that general dental practitioners (GDPs) identify suspected cancer patients and make urgent referral for specialist care. Some of these guidelines accepted by certain countries to improve early detection and referral include the National Institute for Health and Care Excellence (NICE) guidelines for urgent referral in the United Kingdom, Scottish Intercollegiate Guidelines Network for Scotland, and Spanish Oral Cancer Campaign and the Early Intervention in Oral Cancer in Portugal.[6,7]

Of all the known guidelines, the NICE guideline seems to be the most widely used. It was first established in 2005 and subsequently revised in 2015.[7] It advocates a 2-week rule which states that if cancer is suspected, there should be a

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maximum of 14-day interval between referral from primary care and consultation with a specialist.[8] This in essence should speed up the overall management of cancer.

While these guidelines are well popularized in the Western countries,[9,10] this is unsure in the developing countries. The popularization and integration of the referral guidelines in our environment is faced with challenges, which include but not limited to late presentation on the part of the patients due to trivialization of their symptoms, low index of suspicion by practitioners, and knowledge and attitude toward implementing referral guidelines to aid urgent referrals of suspicious lesions for specialist care.[10]

To the best of our knowledge, little or no studies have assessed the awareness, knowledge, and attitude of GDPs in the literature reviewed. Therefore, the purpose of this study is to assess the awareness, knowledge, and attitude of GDPs toward OCRG.

Materials and Methods

This was a descriptive, cross-sectional study conducted on GDPs in Edo State, who consented to participate in the study. The study was carried out between January and April 2019. Anonymity and confidentiality of all the responses from the GDPs were assured in the filling of the questionnaire.

A pretested, close-ended, semi-structured, and self-administered questionnaire was created and sent physically to GDPs using a well-known dental social media group in Edo State. The questionnaire was developed by the researchers. The questionnaire consisted of 21-items divided into four domains: (1) bio-demographic characteristics, (2) awareness of NICE OCRG, (3) knowledge on NICE OCRG, and (4) attitude toward NICE OCRG. The preliminary questionnaire was validated with consensual validity. This involves examination of the questionnaire by a panel of three independent oral and maxillofacial surgeons affiliated to the Department of Oral and Maxillofacial Surgery, University of Benin Teaching Hospital; the feedback was used to revise the items of the questionnaire. Then, the questionnaire was pretested using a pilot study on ten respondents, and modification of the questions was done accordingly.

Demographic information inquired about the respondents' age, gender, years of practice, and place of practice. The awareness section inquired about respondents' insight about any urgent oral cancer referral pathway system. The knowledge section was narrowed on the NICE OCRG guidelines.[11] It also sort to find out if respondents know what it entails in order to know when to make urgent referrals. The attitude section inquired about respondents' level of acceptance of the use of OCRGs.

Awareness of NICE OCRG was assessed to mean those who have heard of the term NICE OCRG before the commencement of the study. The knowledge of OCRG was assessed based on a point score system developed by the researcher addressing the 11 questions on the knowledge of NICE OCRG. Each response score ranged from 0 to 2 (yes = 2, no = 1, and no idea score = 0). A percentage score of ≤4 points (49.9%) was graded as poor knowledge, 5–8 points (50%–69.9%) as fair knowledge, and ≥9 points (≥70%) as good knowledge. Descriptive statistics were generated. Qualitative data were presented as frequencies and percentages, and quantitative data were presented means and standard deviations. The study was analyzed using Statistical Package for Social Sciences (SPSS) version 21 (IBM, Chicago, USA).

Results

Eighty-three out of the 105 randomly distributed questionnaires were retrieved, given a response rate of 79.0%. The sociodemographic characteristics of the respondents are presented in Table 1. The male-to-female ratio was 1.4:1.0. The mean age was 33.3 ± 5.30 years, ranging from 21 to 50 years. Most of the GDPs are within the age range of 20–30 years, while the least numbers were over 50 years. Over 50% of the GDPs had practiced for <10 years and <30% practiced in the rural areas. Table 2 summarizes the proportion of OCRG

Table 1: Sociodemographic characteristic of the respondents (*n*=83)

Characteristics	Count (%)
Age (years)	
20-30	34 (41.0)
31-40	31 (37.3)
41-50	15 (18.1)
>50	3 (3.6)
Gender (*n*)	
Male	48 (57.8)
Female	35 (42.2)
Year of practice	
<1	27 (32.5)
1-10	34 (41.0)
11-20	22 (26.5)
Place of practice (*n*)	
Urban	59 (71.1)
Rural	24 (28.9)

Table 2: Awareness and source of information of National Institute for Health and Clinical Excellence oral cancer referral guidelines by general dental practitioners in Edo State (*n*=83)

Variable	Frequency (%)
Awareness of OCRG	
Ever heard	53 (63.9)
Never heard	30 (36.1)
Source of information	
Colleagues	7 (8.4)
Journal	3 (3.6)
Undergraduate training	4 (4.8)
Internets	36 (43.4)
Seminars	3 (3.6)

OCRG: Oral cancer referral guideline

awareness among the respondents. Only 36.1% had never heard of OCRG. Most of the respondents (67.9%) got their information from the Internets, followed by colleagues (13.2%) and undergraduate training (7.54%).

On the knowledge score of the respondents, 43 (51.8%) respondents had fair knowledge of OCRG followed by those that had good knowledge ($n = 25$, 30.1%) and 15 (18.1%) had poor knowledge of the NICE OCRG. Table 3 summarizes the responses of the respondents to questions on the knowledge of OCRG. Only 33% of the respondents knew that patients with symptoms suggestive of oral cancers should be referred within 2 weeks according to the National Institute of Health and Care Excellence (NICE) referral guidelines. Only 38.6% and 41.0% of the respondents knew that OCRG can help to avoid delayed treatment and inappropriate referral, respectively [Table 3].

Table 3: Knowledge of National Institute of Health and Care Excellence oral cancer referral guidelines by general dental practitioners in Edo State ($n=83$)

Knowledge domain	Count (%)
According to the NICE referral guidelines, patients with symptoms suggestive of oral cancers should be referred within 2 weeks	
Yes	33 (39.8)
No	0 (0.00)
Don't know	50 (60.2)
The NICE guidelines for referral of oral cancer patients are compulsorily used by GDPs in the United Kingdom	
Yes	45 (54.2)
No	6 (7.2)
Don't know	32 (38.6)
Ulceration of oral mucosa >3 weeks is suggestive of oral cancer and requires prompt referral	
Yes	61 (73.5)
No	7 (7.2)
Don't know	15 (18.1)
Oral swelling >3 weeks is suggestive of oral cancer and requires prompt referral	
Yes	62 (74.7)
No	7 (8.43)
Don't know	14 (16.9)
All oral red, or red and white patches are suggestive of oral cancer and require prompt referral	
Yes	57 (68.7)
No	10 (12.0)
Don't know	16 (19.3)
Unexplained tooth mobility not associated with periodontal disease is suggestive of oral cancer and requires prompt referral	
Yes	68 (81.9)
No	6 (7.23)
Don't know	9 (10.8)
Unexplained pain in the mouth >3 weeks is suggestive of oral cancer and requires prompt referral	
Yes	59 (71.1)
No	8 (9.64)
Don't know	16 (19.3)
The level of suspicion of oral cancer is high if the patient is a heavy smoker	
True	79 (95.2)
False	0 (0.00)
Not sure	3 (3.61)
The NICE referral guidelines can help avoid inappropriate referrals	
True	32 (38.6)
False	10 (12.0)
Not sure	41 (49.4)
NICE referral guidelines can aid in the early detection and management of oral cancer	
True	34 (41.0)
False	9 (10.8)
Not sure	40 (48.2)
In keeping with the NICE referral guidelines, referred patients who screened negative should be referred back to the GDPs by the specialist	
True	33 (39.8)
False	21 (25.3)
Not sure	29 (34.9)

NICE: National Institute of Health and Care Excellence, GDPs: General dental practitioners

As summarized in Table 4, >50% of the respondents either agreed or strongly agreed that OCRG can help reduce diagnostic delay and false-positive referrals of oral cancer if adopted in Nigeria. Among the respondents, 56.6% and 27.7%, respectively, agreed and strongly agreed that it is necessary for GDPs to undergone basic investigations prior to oral cancer referral to the specialist. Nearly 77.1% of the respondents were willing to apply the NICE OCRG if adopted in Nigeria. The response of the respondents to questions regarding the attitude of GDPs toward NICE OCRG is summarized in Table 4.

Discussion

This study reports the overall awareness, knowledge, and attitude regarding the oral cancer NICE OCRG among the GDPs in Edo State, Nigeria. To the best of our knowledge, it is unclear if there is any available study on this topic in literature globally. Unfortunately, most oral cancers, even in Western countries, present late for specialist care. The reasons for this late presentation are multifolds ranging from patients' to doctors' factors. A commonly cited reason for late presentation is the delay in referral from primary and secondary care centers, thus raising awareness of guidance to the timing of oral cancer referrals.[12]

Delays that occur from the time a patient experiences his/her first symptoms to the time of treatment can be conceptually divided into various stages, primarily based on who is responsible for this delay.[13] Patient delay is defined as the time elapsed between symptom discovery and the first medical contact with a medical doctor or dentist concerning that symptom. Referral delay, also referred to as scheduling delay, is defined as the period between the first medical contact in a primary care setting with the general practitioner or dentist and the next contact with the medical specialist. Medical specialist delay is defined as the first contact with the medical specialist until a definitive diagnosis.[14] The UK was the first European country to establish national guidelines to facilitate prompt referral of a suspected malignancy from primary to secondary care. Based on the UK system, the Spanish Dental Council has introduced a similar scheme to their dentists. The NICE referral guideline was established in 2005 and was revised in 2016. Use of 2-week waiting referral scheme in the UK was expected to provide rapid access to secondary care facilities to confirm the diagnosis of suspected cancer. The referral criteria are ulceration of oral mucosa persisting >3 weeks, oral swelling >3 weeks, and all red or white patches of the oral mucosa.

The present study showed that the level of respondents' awareness about the NICE ORCG was encouragingly higher compared to that of respondents' unawareness [Table 1]. Lack of related studies in the literature hampered the comparison of the present study. The high level of awareness in this study could be that most GDPs practiced in the urban settings and have access to internet services.[15] In this study, internet services were relevant in search of information among the respondents as most were aware of ORCG via this medium. Disappointingly, only 7.54% `had heard about the NICE OCRG from the undergraduate training. Therefore, clinical guidelines by NICE for referral of oral cancer should be taught in tertiary institutions in Nigeria. Furthermore, only 5.66% of the respondents knew of OCRG through seminars, and this also demands emphasis on this topic in seminars.

Our study population showed sufficient knowledge of the NICE OCRG [Table 3]. Only 18.1% of the respondents demonstrated insufficient knowledge regarding the NICE OCRG. This level of knowledge could be attributable to the increasing rate of internet awareness among the GDPs in this

Table 4: Attitude toward National Institute for Health and Clinical Excellence oral cancer referral guidelines by general dental practitioners in Edo State (n=83)

Attitude domain	Count (%)
NICE oral cancer referral guidelines can help reduce diagnostic delay and false-positive referral of oral cancers if adopted in Nigeria	
Agree	29 (34.9)
Strongly agree	17 (20.5)
Disagree	13 (15.7)
Strongly disagree	9 (10.8)
Neither agree nor disagree	15 (18.1)
According to the NICE oral cancer referral guidelines, it is necessary for the GDPs to carry out basic investigations before referral to the specialist	
Agree	47 (56.6)
Strongly agree	23 (27.7)
Disagree	5 (6.02)
Strongly disagree	1 (1.20)
Neither agree nor disagree	4 (4.82)
If the NICE oral cancer referral guideline is adopted in Nigeria, will you comply?	
Yes	64 (77.1)
No	9 (10.8)
Don't know	10 (12.1)

NICE: National Institute of Health and Care Excellence, GDPs: General dental practitioners

environment.[16,17] The findings in the present study could not be compared with those of related studies because of limited availability of such studies.

Overall, the attitude of the respondents toward the NICE OCRG was favorable in our study. Only a few respondents (10.8%) were not willing to implement the NICE OCRG if adopted in Nigeria unlike the overwhelming percentage of respondents willing (77.1%) to implement it. The likely reasons for this willingness may be that the NICE OCRG is a simple, clear, fail-safe referral scheme that may greatly diminish the length of the delay.[18-21]

Despite the high response rate in our study, there were some potential limitations that should be taken into consideration in interpreting the findings of this study. One limitation was lack of related studies globally for scientific comparison. Another limitation may be the format of the question as different wordings can give different results. Despite these limitations, this study being the first to be reported, to the best of our knowledge, provides valuable baseline information on the level of awareness and knowledge and altitudinal behavior of GDPs toward NICE OCRG in Nigeria.

Conclusion

The GDPs in Nigeria are well informed in terms of awareness and knowledge of the NICE OCRG, and this means implementing the scheme will be easy. More so, there was a favorable attitude toward the NICE OCRG by GDPs in Nigeria by demonstrating their willingness to implement it if adopted in Nigeria. We, therefore, recommend for a policy to recommend the NICE OCRG by all GDPs to reduce diagnostic delay and false-positive referral.

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Conflicts of interest

There are no conflicts of interest.

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