

## Case Report

# Challenges in Management of Oral Cancer Cases Among the Indigenous Nicobarese Tribe of the Remote Car Nicobar Island, India during COVID19 Pandemic-A Case Report Series

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### Abstract

The prognosis of oral cancer highly depends on early diagnosis and access to proper treatment measures. The indigenous communities in India like the rest of the world carry a disproportionate burden of diseases compared to their counterpart due to inequality in healthcare services. This study reports a series of cases of four oral cancers among the indigenous Nicobarese tribe of the remote Car Nicobar Island. The late diagnosis due to delay in the access to health care facilities along with the stringent pandemic containment measures imposed due to the COVID-19 pandemic had severely affected the outcome of these cases. This is a mere attempt to throw light on the challenges in accessing healthcare at a grass root level despite the efforts put forth by the various stakeholders for enabling equitable access to healthcare. Further research is needed to explore the various challenges and their impact on this indigenous population.

**Keywords:** Healthcare access; Health inequality; Indigenous Nicobarese; Oral cancer

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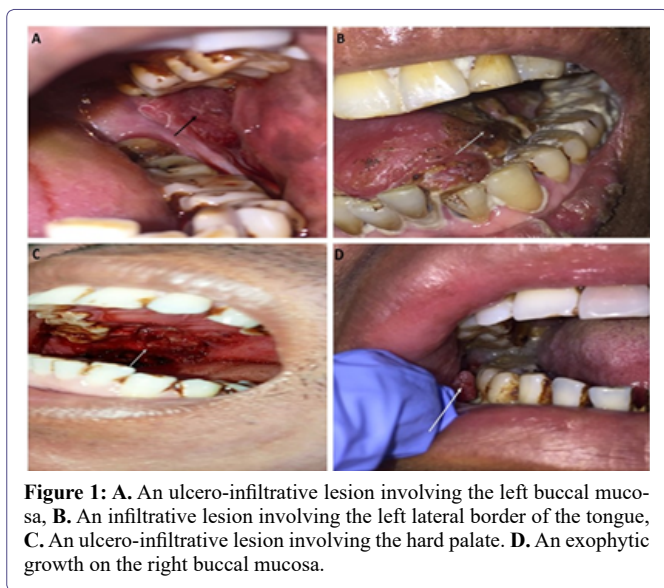
### Introduction

Indigenous populations across the world carry a disproportionate burden of diseases compared to their non-indigenous contemporaries as a result of widespread health inequalities among this population [1]. These inequalities occur as a result of socioeconomic and geographical disadvantage, government assimilation policies, cultural annihilation, and racism which limit their access to healthcare [2]. The Nicobarese tribe, one among the six aboriginal tribes of the Andaman and Nicobar Islands inhabits the Nicobar archipelago with a major concentration at Car Nicobar Island [3]. The geographic remoteness of the Nicobarese, compounded by strong cultural beliefs and less access to existing healthcare services often limits healthcare-seeking behavior of this community. With the epidemiological evidence on existing lifestyle practices like tobacco and alcohol use among this community, it is likely that it exacerbates the risk of non-communicable diseases including oral cancer [4]. This series is a presentation of four cases of oral cancer among the Nicobarese who were identified as part of a house-to-house survey during June 2020 to March 2021 and all the four cases succumbed to oral cancer.

### Case Reports

Case one is a Nicobarese male of 52 years of age who was recruited and subjected to screening for oral cancer and precancerous lesions. Since three months, the patient had been complaining of pain and an ulcer in his mouth. His medical history revealed that he did not have any systemic health concerns; but, for past 15 years, he had been chewing smokeless tobacco (zarda) that had been blended with areca nuts and slaked lime. An ulcero-infiltrative lesion was discovered during the clinical examination, and it was found to be covering the left buccal mucosa with everted indurated edges (2cm×2cm). Invasive squamous cell carcinoma was determined to be present after histological evaluation of the biopsy samples. (Figure 1A). According to the American Joint Committee for Cancer, the lesions were staged as T2N2M0-Stage IVA based on our clinical and histological evaluation of them (AJCC). Although the patient was directed to an oncology hospital on the mainland, the patient did not visit the hospital. After three months, the lesion progressed into a proliferative lesion on the left side of the face with orofacial fistulas, resulting in a complete trismus, pus discharge, and a large number of painful and palpable cervical lymph nodes. The patient expired in January 2021. Case two is a 85 year old Nicobarese male complained of an ulcer on the left lateral border of tongue associated with pain and difficulty in swallowing for a month. The patient was a chronic beedi smoker for 25 years and chewed zarda with betel quid and slaked lime occasionally. On examination, an infiltrative lesion was found on the left lateral border of tongue (Figure 1B) measuring 2x1cm, irregular in shape extending to floor of the mouth not crossing the midline and had everted edges with bleeding from the lesion. Firm and tender cervical and submandibular lymph nodes were also present. Based on the AJCC staging, the oral cancer cTNM staging was T2N2bM0- Stage IVA. During a follow up after three months, there was a swelling extending throughout the left dorsum of the tongue till midline resulting in restricted movement of the tongue and limiting the intake of food. The patient expired in

February 2021. Case three is a 48 year old Nicobarese male complained of pain and ulcer on right palate for past two months. The patient chewed zarda, betel quid and slaked lime daily and used sukka (a form of dried tobacco with slaked lime) for the past 34 years. On examination, an infiltrative lesion was found on right hard palate (Figure 1C) (3x3cm) extending to soft palate crossing midline and penetrating cortical bone. The lesion was tender, indurated and had irregular margins with bleeding. The mouth opening was limited to 2cm and had a swelling throughout the right cheek and condylar region with firm and tender cervical and submandibular lymph nodes. Based on the AJCC staging, oral cancer cTNM staging was T4aN2bM0- Stage IVA. After three months, the extraoral swelling had increased and mouth opening was limited to less than 2cm with tender posterior triangle lymph nodes. The patient expired in February 2021. Case four is a 55 year old Nicobarese male had an abnormal growth on right buccal mucosa and vestibule for over three months with difficulty in opening mouth. The patient chewed zarda with betel quid and slaked lime daily for 20 years. On examination, an exophytic growth (Figure 1D) (1.5x1.5cm) along with an ulcero-infiltrative lesion was found on right buccal mucosa extending into mandibular vestibule. The lesion was tender, indurated with irregular margins and mouth opening was limited to 2 cm with swelling of right side of face with orofacial fistulas and firm cervical and submandibular lymph nodes. Based on the AJCC staging, oral cancer cTNM staging for this patient was T1N2bM0- Stage IVA. The patient expired in April 2021.



## Discussion

It has been reported that indigenous communities experience a greater burden of diseases compared to their non-indigenous peers because of the population's widespread health disparities [1]. These disparities, which restrict their access to healthcare, are brought on by financial and geographic disadvantages, as well as government assimilation policies, cultural obliteration, and prejudice [2]. The Car Nicobar Island is totally inhabited by Nicobarese tribe. The Nicobarese tribe, one of the six indigenous tribes of the Andaman and Nicobar Islands, is present across the Nicobar archipelago, with Car Nicobar Island being their main home [3]. The Nicobarese community's tendency to seek medical care is frequently constrained by their geographic isolation, strong cultural beliefs, and limited access to available

services. According to epidemiological research, this community's current lifestyle habits including smoking and drinking increase the risk of non-communicable diseases like mouth cancer [4].

The COVID-19 epidemic has a substantial impact on the early diagnosis of these conditions in India, where there is a systemic delay in the identification of oral premalignant illnesses and oral cancer [5]. In spite of the fact that they had been sent to the tertiary hospital for a confirmed biopsy and subsequent management, the patients were unwilling to go. This was due to a number of factors, including the pandemic's limits on transportation, the patients' lack of health-seeking behaviour, the expensive prices of the hospital, and their restricted access to healthcare.

Even though there have been breakthroughs in medical care, not all members of society have profited equally from these advancements [1]. Oral cancer therapy outcomes in India are determined by delayed diagnosis, delayed presentation to a healthcare institution, and lack of access to healthcare professionals [6]. This is especially true in rural areas of the country. As a result of the stringent pandemic containment measures taken at the national and local levels in response to the COVID-19 pandemic, rural areas experienced a further setback in terms of their access to healthcare. According to recent studies, the utilisation of healthcare services has undergone significant change as a direct result of the management measures taken for COVID-19 [6]. These changes have also been observed with cancer treatments that result in longer life [7,8]. Efforts of a large number of stakeholders to guarantee that everyone has access to healthcare, the goal of this case study was to draw attention to the obstacles that ethnic people face while attempting to acquire healthcare in their nearby surroundings.

## Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, all the patients have given consent for their images and other clinical information to be reported in the journal. The patients understood that their names will not be published and due efforts will be made to conceal their identity.

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## Conflicts of interest

There are no conflicts of interest.

## Ethical Statement

This study was approved by the Institutional human ethical committee of Regional Medical Research Centre, Port Blair with the Helsinki Declaration of 1975, as revised in 2000.

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