

# Accessory Mental Nerve: A Case Report

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## ABSTRACT

The presence of an Accessory Mental Nerve (AMN) is rare. The mental foramen is an important landmark in the mandible for administration of local anaesthesia and mental nerve identification and its preservation is of paramount importance in various surgical procedures. This article presents a case of an incidental finding of accessory mental nerves during open reduction and fixation of a compound fracture of left body of mandible. Knowledge on anatomic variations is helpful in diagnosis, treatment planning and management during surgical procedures.

## CASE REPORT

A 22 year old male reported to the Department of Oral and Maxillo-facial Surgery, Rajarajeswari Dental College and Hospital, India, with a history of trauma. His medical history was not significant. On examination, it was diagnosed as a compound fracture of left body of mandible. An orthopantomograph revealed fracture line and no evidence of accessory mental foramen. The fracture fragments were displaced. Under general anaesthesia, by using an intra-oral approach, a degloving incision was placed and full thickness mucoperiosteal flap was raised. Mental nerve was identified at the apices of first premolar and distal to mental foramen, two more nerves were found at the periapex of second premolar, one above the other, coming out of a separate foramina. These were identified as accessory mental nerves. All the three mental nerves were carefully dissected and spared. The fracture fragments were reduced and they were fixed with miniplates. Healing was uneventful and no post operative paraesthesia was found [Table/ Fig-1].



**[Table/Fig-1]:** Three mental nerves were carefully dissected and spared. The fracture fragments were reduced and they were fixed with miniplates

**Key words:** Mental nerve, Mandibular fracture

## DISCUSSION

The accessory mental nerve, a branch of inferior alveolar nerve, exits the mandibular canal from different foramina. It is thought that mental nerve separates even earlier than the formation of mental foramina and this could lead to formation of accessory mental foramina [1]. In the case which has been presented here, accessory mental nerves were an incidental finding. The presence of accessory nerves is an added challenge to the surgeon. Their retraction and protection during surgery is vital for preventing post operative paraesthesia.

The average position of the mental foramen is at the apices of the second premolar [2]. The mental foramen is located on the anterolateral surface of the mandible, 13-15 mm superior to the inferior border of the mandible [3]. The presence of accessory mental nerve below the first molar has been reported [4]. The average dimension of accessory mental nerve has been reported to be 1mm [5]. The presence of accessory mental foramen has been demonstrated in various anthropometric, cadaveric dissections and radiological studies. The incidence of accessory mental foramen varies in different ethnic groups; 5.7% in American blacks, 3.6% in Egyptians, 3.3% in Greeks, 9.7% in Melanesians, 3% in Hungarians, 2.6% in French, 1.5% in Russians and 4% in American whites. In a study which was done on 525 dry mandibles, Gerhenson et al., reported that 4.3% of the mandibles had double mental foramina, 0.7% had triple mental foramina and that one mandible had 4 mental foramina on one side [6]. Injuries to any of the nerves during surgical procedures in this area can cause anaesthesia or paraesthesia [7].

## CONCLUSIONS

Accessory mental nerve is a rare anatomic variation. During various surgical procedures which are done in this area, presence of accessory mental nerve should be considered, to achieve a profound local anaesthesia and to avoid neurovascular damage. Since mental nerve supplies the skin of the chin, mucous membrane of the lower lip and gingiva, a careful identification, dissection and preservation is of paramount importance, to avoid post operative paraesthesia. Knowledge on anatomic variations influences the diagnosis, treatment planning and eventually the management.

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