

Background

Cone beam computerized tomography has been used to identify morphological features of the inferior alveolar nerve in different populations.

Objective

Of the present investigation was to detect structural variations in the inferior alveolar duct in Colombian population.

Method

Descriptive, retrospective study of 242 CBCT images from patients of a University Foundation in Bogotá - Colombia Clinics. Duct length and diameter were measured and its number, anterior loop and communications were described.

Result

The sample included 67.35% women (average age:58.25 year), 32.65 % men), (60.08 year). Length of right duct: 66.37 mm, left: 66,56 mm. Anterior loop was present in the right side in 76,86%, and in left side in 79,34 (Table, Figure1).

Naitoh et al 2009 (44.3% for type III bifurcation) but is lower than the value reported by Haas *et al* 2016 in the meta-analysis of data from populations of USA, Canada, Spain, India and Chile (16.25%). This remarkable difference may be related to population variability and to the methods of detection.

Variable	n	Media mm	Error estandar de la media mm	Desv.Est .mm	CoefVar mm	Mínimo mm	Mediana mm	Máximo mm
Longitud derecho	242	66,373	0,363	5,647	8,51	51,98	65,81	84,5
Longitud izquierdo	242	66,566	0,324	5,04	7,57	55,71	66,23	85,03

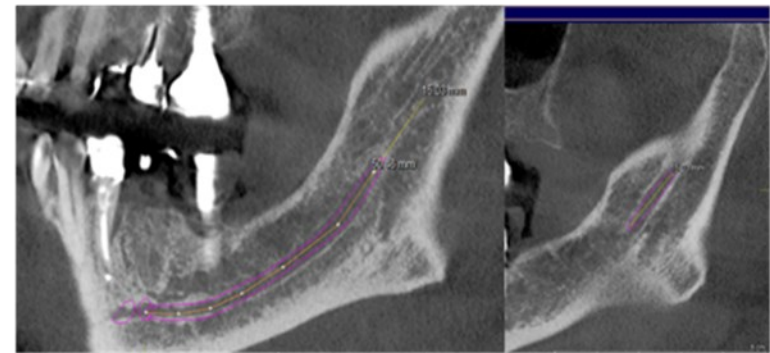
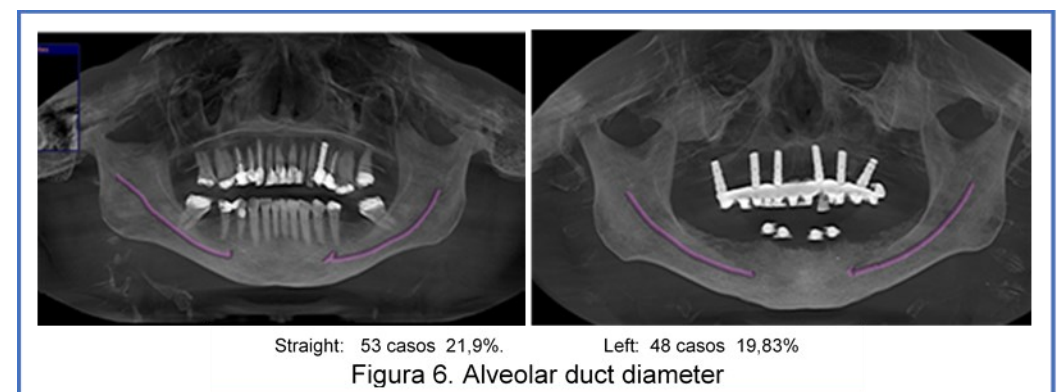


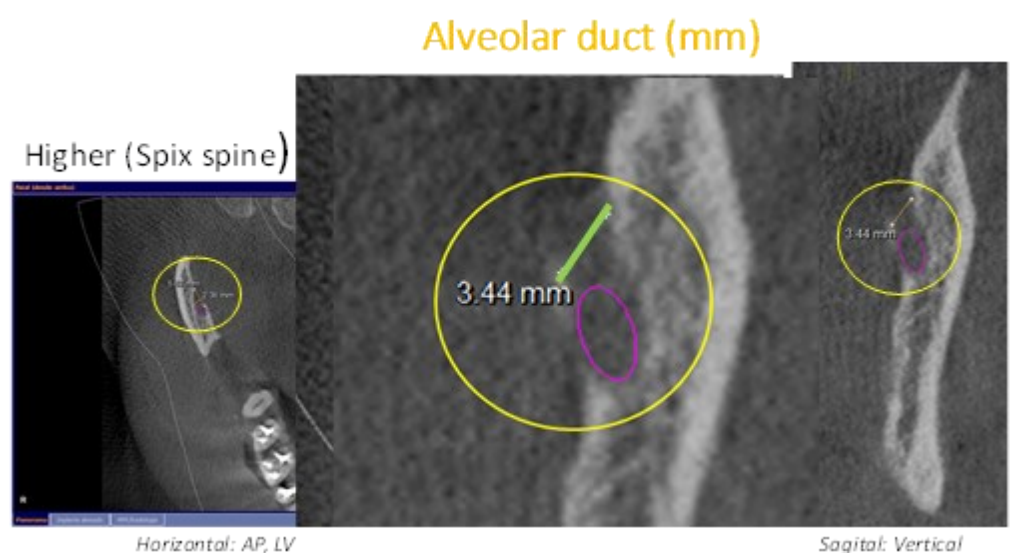
Figura 1. Longitud conductos alveolares inferiores bilaterales



VARIABLE	Average (mm)	S.D. (mm)	Coefficient of variation (%)
Superior vertical right	5.619	2,394	42,61
Superior vertical left	5,394	2,28	42,27
Inferior vertical right	3,178	1,023	32,21
Inferior vertical left	3.14	0.97	30.89
Superior Antero-posterior right	4.31	1.82	42.32
Superior Antero-posterior left	4.37	1.81	41.38
Inferior antero-posterior right	3.37	1.07	31.82
Inferior antero-posterior left	3.2	1.06	33.11
Superior lingual-vestibular right	3.31	0.9	27.16
Superior lingual-vestibular left	4.6	1.07	38.33
Inferior lingual-vestibular right	2.25	0.72	32
Inferior lingual-vestibular left	3.3	1.07	31.86

Table 1. Bilateral foramen Dimensions in the three tomographic directions (n = 242). Data

Single duct in 19.83%, multiple in 0,41%. No significant differences were found between bilateral foramen dimensions (anteroposterior p=0,594); vertical p=0,523), lingual- vestibular p=0,260). In the present study, the prevalence of morphological variations (bifurcations) of the inferior alveolar duct was 81,4%. This percentage is higher than that found by



Conclusion

The bilateral dimensions of the alveolar nerve duct are not equal and there is a prevalence of morphologic variations in 81.4% of the Colombian group studied. The diameter of lower foramen is higher in fully edentulous patients than in partially edentulous.

KEY WORD

Inferior Alveolar duct. Cone beam computerized tomography (CBCT) Mental Foramen. Mandibular nerve morphology