

# A Study of Zygomatico Facial Foramen in North Indian Crania.

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## ABSTRACT

Studies of non-metric cranial variants have been a field of considerable interest to research workers especially because of their racial and regional importance. 28 north Indian skulls of U.P. were studied for the zygomatico facial foramen, a cranial variant in the present study. Findings are discussed and compared with other global studies and are found to be of considerable regional and racial significance.

**Key Words:** Cranial Variant, Zygomatico facial foramen.

## INTRODUCTION

Non-metric cranial variants have been a subject of study by many pioneering workers.<sup>[1]</sup> Many such variants have been observed on a racial basis also<sup>[2]</sup> and are of considerable ethnic but lesser forensic interest. Berry<sup>[3]</sup> made a special study of non metrical human cranial variants including double hypoglossal canal. Present study is undertaken to know the incidence of variant of Zygomatico facial foramen and to draw significant conclusion, if any, from this study.

## MATERIALS AND METHODS

28 North Indian human crania were studied for this study. Human crania of museum of Rohilkhand medical college Bareilly were studied. Incidence of Zygomatico facial foramen was noted in these crania, attention was also paid to whether this variant was bilaterally present or unilaterally present and if unilateral whether it is more on right side or left side.

## RESULTS

Out of 28 skulls studied, Zygomatico facial foramen was seen only in 5 skulls (in 2 bilaterally and in 3 unilaterally on left side). Thus the incidence of this cranial variant was 12.5%. Out of these, it was bilaterally [Figure1].only in 5% cases. However, unilaterally it was present [Figure 2] in 7.5% case.

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## DISCUSSION

Cranial variants have aroused the curiosity of anatomists for many decades.<sup>[4]</sup> It was Wood Jones, however who first proposed that the differing incidences of these minor variants which occurred in different races might be useful in anthropological studies.<sup>[5]</sup> Laughlin & Jorgensen put this idea in practice and in 1967.<sup>[6]</sup> Berry & Berry suggested that a wide range of these variants could be used to calculate a distance statistic between population samples.<sup>[3]</sup> This paper is concerned with description and racial & regional incidence of Zygomatico facial foramen one of the important cranial variant.



**Figure.1:** Showing bilateral zygomatico-facial foramen

Cranial variants like all other variants have been studied by many workers, most of them are recognized only by mention in anatomical text books, being described in terms such as rare or occasionally found, nevertheless a few of them have been utilized as anthropological markers.<sup>[7,8]</sup> Some variants are consequences of disease or other extrinsic influences<sup>[9-11]</sup>, however most of these variants result from normal developmental processes and are genetically determined.<sup>[3]</sup> The frequency of any particular variant is more or less constant in a given race and is somewhat similar in related races.



**Figure 2:** showing unilateral zygomatico-facial foramen.

Woodjones<sup>[12]</sup> used data on skull variants in a more systemic comparison number of far eastern group. Berry<sup>[3]</sup> made a special study of non metrical human cranial variations including the Zygomatico

facial foramen. His findings are given in the Table 1

In our study it was observed that Zygomatico facial foramen was present in 12.5% of crania. Out of these in 5% crania it was bilaterally present and in 7.5% cases it was unilaterally present. In north India (U.P.) the incidence of this variant was greater (12.5%) than in Nigeria (11.6%), Palestine (7%), Palestine modern (8.3%) and Burma (9.8%) and lesser than in Egypt (16.6%), India (Punjab, (17.9%), North America (24%) and South America (27.4%).

Hence the current study provides valuable data from U.P. the largest state of India, and compares the same with data of different global regions. The findings are of considerable racial and regional global significance.

**Table 1:** Non metrical human cranial variations in Zygomatico facial foramen.<sup>[3]</sup>

Region	No. of skulls studied	Variation (%)
Egypt (summed)	250	16.6 %
Nigeria (Ashanti)	56	11.6%
Palestine (Lachish)	54	7%
Palestine (Modern)	18	8.3%
India (Punjab)	53	17.9%
Burma	51	9.8%
North America (British Columbia)	50	24%
South America (Peru)	53	27.4%
Our study (U.P) North India	28	12.5%

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