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POSTER PRESENTATION – P5

SOME ANTHROPOLOGICAL CHARACTERISTICS OF THE SOUTHERN SINAI BEDOUINS

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Background: The study of the unique endogamous Southern Sinai Bedouin population involves an integrated approach that considers various anthropological characteristics.

Objective: To analyse unique population data on lateral asymmetry of functional features, taste sensitivity to phenylthiocarbamide, and pigmentation among Bedouins.

Subjects and methods: Laterality traits (handedness, hand clasping, arm folding, dominant eye) were studied in 1,061 men and 172 women. PTC sensitivity data obtained by the classic serial dilution method were studied in healthy male Bedouins from different tribes (n=317). Spectrophotometric skin measurements were collected using an EEL spectrometer in 135 South Sinai Bedouins (men).

Results: The proportion of left-handed Bedouin men was 6.62%, while the proportion of left-handed women was 5.11%, that is generally lower than in other human populations. Significant gender differences in eye dominance were observed; motor tests showed a tendency toward a lower percentage of left-handedness in women. Significant intertribal differences in sensitivity to phenylthiocarbamide were found in Bedouin communities: a high frequency of the T allele was recorded in most tribes, while a relatively low level was found in the Gebelia tribe. Skin pigmentation in Bedouins was darker than in other Arab populations; skin reflectance showed no significant intertribal differences at a wavelength of 685 nm.

Conclusions: The specific features of lateralization trait distribution in Bedouins are due to both cultural characteristics and gene drift in small groups. Intertribal differences in the frequency of PTC genes can be explained by genetic drift or endogamy, but further research is needed to determine which factor is more significant. The relatively dark pigmentation of the skin of Sinai Bedouins is explained by the fact of intermarriage with the Sudanese. A unique group of Bedouin tribes is characterized by a specific combination of anthropological characteristics.

Keywords: Southern Sinai Bedouins; Laterality; Sensitivity to phenylthiocarbamide; Pigmentation; Spectrophotometry.