F34 A Comparative Study on Dental Morphology Image of Chinese

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In modern forensic science, four techniques for body identification are widely used. In mass disasters, identification of dental morphology image can solve identification problems and perform very satisfactorily. This presentation will impact the forensic community and/or humanity by presenting a comprehensive description of that method.

In modern forensic science, four techniques for identification are widely used, i.e., fingerprint identification, eye cornea identification, DNA technique, and dental morphology identification. The eye cornea is a soft issue, fingerprints are generally located on organic substances, and neither can be kept for long. Although DNA techniques can offer very precise data, national archives have not compiled this information. One possible explination may be the expense and time needed to perform this task. On the other hand, in mass disaster situations, identification of dental morphology image can solve the above more than adequately. This pre- sentation will provide a comprehensive description of that method.

Experimental Result

1. Central incisor growing balance, upper incisor (width): 11 and 21, average are both 0.84cm; lower incisor: 31, average is 0.54cm and 41 is 0.53cm.
   Feature point:
   a. growing no balance, one person 21 bigger more than 11
   b. upper incisor width less than 0.75cm about 4% and bigger 0.95cm about 2%
   c. lower incisor width less than 0.45cm about 2% and bigger than 0.6cm about 4.5%.
2. Distance from the sharp point of canine to the central line: below 1.4cm, 13 about 1% and 23 about 1%; above 2.0cm, 13 about 1%and 23 without (upper teeth). Below 1.0 cm, 33 about 1.3% and 43 about 4.2%; above 1.5cm, 33 about 2.67% and 43 about2.82% (lower teeth). Important discovery: the inter-canine mean distance (upper jaw), White males 3.6cm, females 3.44c; Black males 3.83cm, females 3.66cm; Chinese 3.38cm (mean of males and females). (Lower jaw), White males 2.78cm, females 2.68cm; Black males 2.98cm, females 2.87cm; Chinese 2.52 cm (mean of males and females) The Chinese inter-canine mean distance is less than that of the White and Black.
3. Height difference between central incisor and lateral incisor (11, 21, 31, 41 are higher as positive) Compared two groups data, >0 in the meantime, about 61%; =0 in the meantime, about 4.6%; <0 in the meantime, 6.42%; others, about 28.44%
4. Height difference between lateral incisor and canine (canine is higher as positive)
   Compared four groups data, <0 in the meantime, about 16.67%;
   =0 in the meantime, about 1.52%; <0 in the meantime, without; others, about 81.82%
5. Notching: There are 48 people, about 40.34% (totality 119 people) and one notching 25 people (concentrated on upper central incisor), about 21%; two notching 16 people, about 13.45%; three notching 3 people, about 2.42%; four notching 3 people, about 2.42%; two notching on single tooth 1 person, about 0.8%.
6. Sheltered teeth: There are 48 people, about 40.34% (totality 119 people)
7. Diastema: There are 10 people, about 8.4%, and turned- diastema, 3 people, about 2.52%
   Notice: Middle diastema is said to be more common in Australian Aborigines, South African Ostraloid, and Boskopoid people but is rare in Chinese.
8. Others: Fragmentary tooth one person, about 0.84% Denture one person, about 0.84%
   Convex teeth one person, about 0.84%
   Inter-concave on the teeth one person, about 0.84%

Above feature points are quite important for dental identification.

Forensic Science, Dental Morphology, Experimental Results

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