

Overrepresentation of New Zealand's Maori in Presumed Shaken Baby Syndrome – Nature or Nurture?

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Miller and Miller have noted the overrepresentation of males in presumed shaken baby syndrome and its possible relationship to head size. [1] Lines [2] has reported on the larger head size of the Maori in a high school age group (European 55.2 cm, Maori 55.6) and Anderson [3] in 0-2 year old non-breast fed children (European mean head circumference 43.3 percentile, Maori 48.6). Anderson did show a higher mean in a smaller number of breast fed European children but the combined figures support the larger size in the Maori (European 47.4, Maori 48.9). I have reviewed medical records concerning two Maori children suspected to have been abused. In each case, these children had unusually large heads (each exceeding the 97th percentile). That this would occur by chance is less than 3% for each case. Since these are independent events, the chance they would both occur is the product of the two or 3% times 3% - less than one in a thousand. Both also had evidence of increased cerebrospinal fluid spaces. This condition, known by many different names, my preference being craniocerebral disproportion, was noted by Piatt [4] to present a possible "pitfall" in the diagnosis of child abuse and more recently confirmed by Vinchon [5] to be associated with the spontaneous occurrence of subdural and retinal hemorrhage, a combination considered highly suspicious for abuse. Alvarez [6] has noted this condition to be "closely related to benign familial macrocephaly", a finding confirmed by Karamzadeh [7], who reported a non-abusive subdural in one of his 20 cases. Kelly [8] has reported a higher incidence of child abuse in the Maori population, noting that "racial susceptibility to accidental SDH" (nature) has been suggested but labeling 2 articles by neurosurgeons "dubious" and preferring cultural factors (nurture). Kelly grouped the new Zealand

population into Maori and Non-Maori and based his incidence on the group of the victim and not of the presumed perpetrator. In one of the cases reviewed, the presumed perpetrator was non-Maori, so neither genetic or cultural factors would apply. Are we perhaps attributing to nurture (abuse) what is actually nature (familial macrocephaly)?

References

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