

FP04

Craniosynostosis: a comparison of suture sites affected in different ethnic cohorts

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Introduction: While syndromic craniosynostosis is associated with many genetic abnormalities, the aetiology of non-syndromic craniosynostosis is poorly understood.

Ethnicity is strongly linked to genetic lineage and it follows that any identifiable differences between patient cohorts of different ethnic groups may suggest underlying genetic (or indeed cultural) causes for craniosynostosis. This study investigates the role that Ethnicity plays in the site of suture affected. Specifically we examine differences in the frequencies of the sutures affected in different groups.

Methods: Retrospective case notes study of all patients attending a regional craniofacial clinic over five years. The ethnicity of patients attending clinic was compared with regional population data to compare the relative prevalence of synostosis.

The proportion of patients presenting with each of the different suture sites affected were then compared between ethnic groups using the Chi squared test.

Results: 312 cases were identified; ethnicity data was obtainable for 296 of these.

The Chi squared test was used to determine whether there were any differences in site of suture affected in the two ethnic groups that predominated in our patient population (South Asian and White British). This gave a Chi-square value of 9.404, significant at $p < 0.05$. This difference was due to more cases of complex craniosynostosis than would be expected in the Asian patients and fewer cases of sagittal synostosis than would be expected.

7.1% of our patient population are of South Asian ethnicity, yet 17.9% of children seen in craniofacial clinic are South Asian. 88.8% of our patient population are of White British ethnicity, although they only account for 71% of patients attending clinic.

Conclusion: The pattern of sutures affected in the South Asian patient population is significantly different to that of White British cohorts. The overall incidence of craniosynostosis would seem to be higher in the South Asian population also.