

Skeletal Surveys in Infants with Isolated Skull Fractures

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OBJECTIVE: The goal was to describe the utility of skeletal surveys and factors associated with both skeletal survey use and referral to child protective services for infants with skull fractures in the absence of significant intracranial injury.

METHODS: A retrospective chart review was performed for infants who were evaluated at a tertiary children's hospital because of an isolated, non-motor vehicle-related, skull fracture between 1997 and 2006. Logistic regression analyses were used to test for associations of demographic factors, clinical findings that raised suspicion for abuse (absence of trauma history, changing history, delay in care, previous child protective services involvement, and other cutaneous injuries), and fracture type (simple versus complex) with the primary outcomes of skeletal survey use and reports to child protective services.

RESULTS: Among the 341 infants in the study, 31% had clinical findings that raised suspicion for abuse and 42% had complex skull fractures. Skeletal surveys were obtained for 141 infants (41%) and detected additional fractures for only 2 (1.4%) of those 141 infants. Child protective services reports were made for 52 (15%) of the 341 children. Both infants with positive skeletal survey findings had other clinical findings that raised suspicion for abuse, and they were among those reported. With controlling for race and age, Medicaid-eligible/uninsured infants were more likely than privately insured infants to receive skeletal surveys and child protective services reports in the presence of a complex skull fracture or clinical findings that raised suspicion for abuse.

CONCLUSION: Skeletal surveys were ordered frequently for infants with isolated skull fractures, but they rarely added additional information, beyond the history and physical findings, to support a report to child protective services.

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