Prevalence of Retinal Hemorrhages in Perpetrator-Confessed Cases of Abusive Head Trauma

Retinal hemorrhages (RHs) are an important clinical feature in the diagnosis of abusive head trauma (AHT). Their prevalence is reported to vary widely, perhaps because they have often been used as one of the clinical criteria for a diagnosis of AHT. We conducted a retrospective study of AHT cases based on a confession of the perpetrator and without RH as a necessary qualifying criterion to establish a realistic estimate of the prevalence of RH in this condition.

Methods. Records of the Child Protection Team of the University of Michigan from 2002 to 2007 were searched to identify cases in which the perpetrator had confessed to AHT to the legal authorities investigating the case. The diagnosis of AHT was based on the perpetrator’s confession plus finding 2 or more of the following: subdural hematoma, skeletal fractures (≥2) on bone survey, and clinical history suspicious for abuse. We analyzed the ophthalmologic examination notes for the prevalence of RHs.

Results. Seventeen cases met entry criteria. Sixteen cases (94%) had RHs. Eleven cases (65%) had 5 or more RHs in both eyes. Two cases (12%) had fewer than 5 RHs in both eyes. Three cases (18%) had 5 or more RHs in one eye but no RHs in the other eye (Table).

Comment. Based on this study of perpetrator-confessed AHT, RHs are present in most (94%) but not all cases. Importantly, there may be fewer than 5 per eye or they may be restricted to one eye (in 18% of cases). Thus, AHT could be present (as defined by perpetrator confession and nonocular clues) if RHs were strictly unilateral and if RHs were confined to one eye. We acknowledge that a confession may be driven by a persuasive array of clinical features and a persuasive interviewer and that confessions are not always reliable. In this study, however, we took the statements given by the alleged perpetrator at face value. The confessions ranged from statements admitting to only mild shaking of the child to statements of severe shaking and slamming the child into a wall.

The 94% prevalence of RHs in our study is comparable to that of previous reports. In one of those studies, the prevalence of RHs was 83% of 81 cases. In a review of 41 reports of perpetrator-confessed cases of shaken baby syndrome from 1969 until 2001, the prevalence of RHs was 100%. A third study provided information about the ophthalmic examination, but unlike in our study, the presence of RHs was an inclusion criterion. Most of the children in our study (65%) had bilateral RHs that were too numerous to count, a finding supported by many previous studies of AHT. However, 12% had fewer than 5 RHs in each eye, a finding not previously documented.

Our study proved that the presence of few RHs and unilateral RHs, as noted in a minority of patients in our study, cannot exclude the diagnosis of AHT.

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Role for Ipsilateral Autologous Corneas as a Carrier for the Boston Keratoprosthesis: The Africa Experience

We report the use of the Boston Keratoprosthesis (KPro) with ipsilateral autologous corneas in 4 eyes of 3 patients in Ethiopia and Sudan. Currently, surgery with the KPro is performed using an allograft donor cornea sandwiched between 2