

Appendix 6

Summary of findings ageing bruises in relation to child abuse

Study	Study type	Study population	Outcome	Quality of Evidence
Barciak et al. 2003	Prospective cross-sectional	50 children, aged 1 week – 18 years. Accidental bruising only. In vivo study.	Accuracy in dating bruises: 0-100%. Interrater reliability for color was 0.4 (95%CI 0.29-0.51). Association between color and bruise age ($P < .001$), but all colors were seen in bruises < 48h old and > 48h old. Determine the age of a bruise by physician isn't accurate.	Standardized study form, each observer was blinded for patient history and not allowed to ask any questions. Small study size, many observers. Possible recall bias in ageing of the bruise. The three age categories will be more precise and less likely to give recall bias.
Carpenter. 1999	Prospective cross-sectional	177 children, aged 6-12 months. Accidental bruising only.	Different colors were seen in different bruises. Yellow color only appeared in bruises > 48h old.	Only one observer. Possible recall bias. Selection bias: they included all children as 'not abused' without clearly stated definition and the main aim of the article is to calculate the prevalence of bruises in not-abused children (later on even two children appeared to be on the CP register).
Stephenson, Bialas. 1996	Prospective case-series	23 children, aged 8 months – 13 years. Accidental bruising only. Only white children.	Correct estimation of age of bruise from photographs in 24 out of 44 cases. Yellow color was not seen in bruises less than 24h old. Ageing of bruises from photographs is imprecise.	One blinded observer. Recall bias age of bruise possible.

QoE: Two small sample size studies. One larger sample size study, but ageing wasn't the main focus of that study. In the two studies focusing on dating a bruise, the observers were blinded for the history. One study with multiple observers, one study with one observer. Recall bias is possible, because to know accurately the time of bruising is difficult, but they also looked at stages (larger time frames).