



## Ho! No! No!

### WE CANNOT AGE BRUISES AFTER ALL!

Physicians assessing children who have been physically abused are frequently asked to give an opinion as to how old bruises are. Investigators and lawyers use these clinical estimates of timescale to determine the likely origins of the injuries and to investigate potential perpetrators. Maguire et al published the first systematic review to establish if it is possible to age children's bruises accurately in clinical practice.

Of 167 studies reviewed by a panel of 15 reviewers, all with child protection expertise, three were included. Their inclusion criteria were studies assessing the age of bruises in children less than 18 years old and the quality of evidence is described in terms of study type and whether gold standard criteria were met, namely: where the exact age of injury was known, whether inter/intraobserver discrepancy was rated, whether the observer was blinded to the time of injury, whether abuse and predisposing medical causes for bruising were excluded, whether children only were assessed, and whether the population was representative.

Out of the three robust studies selected, two studies described color assessment in vivo and one from photographs, which are as follows:

- Stephenson T and Bialas Y Estimation of the age of bruising. Arch Dis Child 1996;74:53-5.
- Carpenter RF. The prevalence and distribution of bruising in babies. Arch Dis Child 1999;80:363-6.
- Bariciak E, Plint A, Gaboury I, et al. Dating of bruises in children: an assessment of physician accuracy. Pediatrics 2003;112:804-7.

Bariciak et al study showed a significant association between red/blue/purple color and recent bruising and yellow/brown and green with older bruising. However, Bariciak as well as Stephenson and Bialas also reported that any color could be present in fresh, intermediate, and old bruises. Results on yellow coloration were conflicting. Stephenson and Bialas showed yellow color in 10 bruises only after 24 hours, Carpenter after 48 hours, and Bariciak et al noted yellow/green/brown within 48 hours. Stephenson and Bialas reported that red was only seen in those of one week or less. The accuracy with which clinicians correctly aged a bruise to within 24 hours of its occurrence was less than 40%. The accuracy with which they could identify fresh, intermediate, or old bruises was 55-63%. Intra and inter-observer reliability was poor.

This systematic review of available literature then concluded that bruises couldn't be accurately dated from clinical assessment in vivo or from a photograph. It was also adamant in stressing that any clinician who offers a definitive estimate of the age of a bruise in a child by assessment with the naked eye is doing so without adequate published evidence, which may be difficult to support in court.

Reference:

Can you age bruises accurately in children? A systematic review.  
S Maguire, M K Mann, J Sibert, A Kemp  
Arch Dis Child 2005;90:187-189



**CHILD PROTECTION UNIT NETWORK**

Phone: (632) 404-3954 Fax: (632) 404-3955

Mobile Hotline: 0917-8900445

E-mail: info@cpu-net.org.ph

URL: www.childprotection.org.ph