

Better tools needed for assessing infant pain

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Currently used pain assessment tools may be underestimating the pain response in infants according to a study published in the open access journal *PLoS Medicine* this week. Dr Slater and colleagues (University College London, UK) studied the association between cortical pain responses in young infants and currently used pain assessment tools which are based on behavioural and physiological measures, such as change in facial expression.

Evidence suggests that inadequate pain management in infants may have immediate and long-term effects. Repetitive pain in preterm infants has been associated with attention deficit disorder, learning disorders and behavioural problems in later childhood.

The researchers studied twelve clinically stable infants on 33 occasions when they required a heel lance for a clinical reason. The relationship between brain activity and a clinical pain score, calculated using the premature infant pain profile (PIPP), was examined in response to this painful event. They found that changes in brain activity correlated to the PIPP scores. These changes were more strongly linked to the behavioural components of the PIPP, e.g., facial expression, than physiological components, e.g., heart rate. They also observed no change in facial expression in 13 of the 33 test occasions but 10 of these showed a positive brain response.

While this was a small single-centre study on clinically stable infants, the results raise further awareness of the ability of infants to experience pain. And, as the authors say, the results highlight the possibility that

"pain assessment based on behavioural tools alone should be interpreted with caution as they could under estimate the total pain response."

Citation: Slater R, Cantarella A, Franck L, Meek J, Fitzgerald M (2008) How well do clinical pain assessment tools reflect pain in infants? PLoS Med 5(6): e129.

<http://medicine.plosjournals.org/perlserv/?request=get-document&doi=10.1371/journal.pmed.0050129>

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