PFA-100\textsuperscript{\textregistered} and regional analgesia in a parturient after ibuprofen overdose

Editor—We describe a previously unreported case of a parturient requesting epidural analgesia after an ibuprofen overdose and her subsequent management, including the use of a platelet function analyser (PFA-100\textsuperscript{\textregistered}).

A 21-yr-old multiparous woman at 38 weeks gestation attended our unit after an overdose of ibuprofen 8 g. Advice was sought from the National Poisons Unit and the acute phase was managed conservatively. The patient was discharged home the next day. Reduced liquor volume necessitated readmission four days after the overdose, however. Labour was induced, after which regional analgesia was requested.

Non steroidal anti-inflammatory drugs (NSAIDs) are known to reversibly affect platelet function. Concern was raised regarding the safety of regional analgesia in this patient, because it was unclear whether this effect was reversible when an overdose of ibuprofen had been taken. Opinions differed between our haematology department and the National Poisons Unit. We therefore decided objectively to measure platelet function using the PFA-100\textsuperscript{\textregistered}.

The PFA-100\textsuperscript{\textregistered} is a benchtop apparatus that haematologists use to identify platelet dysfunction in a range of haematological conditions. The PFA-100\textsuperscript{\textregistered} produces a single reading, the Closure Time, which measures when blood flow ceases through a capillary device, mimicking the process of primary haemostasis. The Closure Time is known to be affected by certain disorders of clotting, and is also influenced by a wide range of drugs.\textsuperscript{1} There are no published data regarding use of the PFA-100\textsuperscript{\textregistered} in NSAID overdose.

Pregnancy reduces the Closure Time compared with the non-pregnant population.\textsuperscript{2} An abnormal Closure Time has been demonstrated in severe pre-eclampsia and in thrombocytopenia of pregnancy.\textsuperscript{3,4} It has been suggested that the PFA-100\textsuperscript{\textregistered} may be used to assess the safety of neuraxial techniques.

Editor—We can only concur with the views of Stacey and colleagues,\textsuperscript{1} but are not entirely surprised by their findings given the evidence from previous work.\textsuperscript{2,3}

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The normal limits of Closure Time are hospital specific. In our hospital, the upper limit of normal is 180 s in a non-pregnant population. A previously reported upper limit of normal in a pregnant population was a Closure Time of 136 s. Our parturient’s CT was significantly elevated at 251 s. On the basis of this result, epidural analgesia was denied. The patient delivered vaginally without the subsequent need for surgical intervention. There was no post-partum haemorrhage.

Currently, the use of aspirin or other NSAIDs alone does not constitute a contraindication to neuraxial techniques. Some patients on such therapy show an elevated Closure Time. To our knowledge, Closure Time values have not been correlated with the clinical risk of an epidural haematoma. It is likely that epidural anaesthesia has been given to many patients who have an abnormal Closure Time.

In the absence of PFA-100® data for this patient, we would have performed the neuraxial technique given our understanding of the half-life and reversibility of ibuprofen. This test clearly identified platelet dysfunction, however, so we felt obligated to offer alternative analgesia. If the PFA is to become a useful tool, further studies are required to clarify the clinical relevance of such results.

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