

46. PFA 100-BLEEDING TIME AS A MARKER OF ASA-INDUCED PLATELET DYSFUNCTION - A RELIABLE METHOD BEFORE SPINAL OR EPIDURAL ANESTHESIA?

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Introduction: Amino-Salicylic-Acid (ASA) induced platelet dysfunction can increase the bleeding time and create an increased risk for central neuraxial blocks like spinal or epidural anesthesia especially when other anticoagulation agents like heparin are used in the perioperative period. Therefore we assessed as part of a greater study the reliability of the PFA 100-Analyzer (Dade Behring, Germany) to detect ASA-induced platelet dysfunction and its reversal with desmopressin.

Material and Methods: After approval of the institutional review board and with written informed consent 30 healthy volunteers were treated with 500 mg ASA on three consecutive days. On day 4 PFA-100-bleeding times were measured and a Born-test of platelet aggregation was performed. 30 minutes, 2 and 4 hours after application of desmopressin (0,3µg/kg body weight) platelet function tests were repeated. Wilcoxon rank sum tests were used for statistical evaluation.

Results: Pathological Prolongation of the ADP/epinephrine induced PFA-100-bleeding time was seen in 90% of the volunteers after ASA treatment. False negative results compared to the Born-Test were obtained in 10% of the volunteers according to the normal range given by the manufacturer although in all cases an individual prolongation of the in-vitro-bleeding time (PFA 100) could be seen.

4 hours after treatment with desmopressin Born-tests began to show deterioration of platelet function and in-vitro-bleeding times were prolonged again, although only in 65% classified pathologic.

Conclusion: The "in-vitro-bleeding-time" measured with the PFA-100 device is a diagnostic tool with 90% sensitivity to detect ASA-induced platelet dysfunction before block placement. It seems that it can also be used to monitor treatment effects with desmopressin although the individual response needs to be observed instead of the wide normal ranges. Further studies with a larger patient population are necessary to address this problem.

Acknowledgement: This study was made possible by a grant of Ferring Arzneimittel GmbH, Germany