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**A COMPARISON OF THE USE OF ATRAUMATIC SPINAL NEEDLES BETWEEN ANESTHESIOLOGY AND EMERGENCY MEDICINE TRAINING PROGRAMS** *Kerimoglu, B. Birnbach, D.J.; Marengo, J.E.; Stein, D.J. Anesthesiology, St. Luke's-Roosevelt Hospital Center, Columbia University, New York, NY* Introduction: Postdural puncture headache (PDPH) following lumbar puncture may be dramatically reduced through the use of "atraumatic" spinal needles and these needles have become standard of care in Obstetric Anesthesia. A recent study (1), however, reported that only a tiny fraction of US Neurologists are using pencil point needles. Based on the practice at our institution, our impression was that Emergency Medicine physicians are likewise continuing to use Quincke needles. Furthermore, it appeared that residents in Emergency Medicine were unfamiliar with atraumatic spinal needles. The aim of this study was to evaluate the prevalence of use of atraumatic spinal needles at residency programs in Emergency Medicine and to compare these results with the Anesthesiology programs at those hospitals. Methods: All 123 residency programs in Emergency Medicine in the US, as listed in the 2002 ACGME directory, were contacted. The departments of Anesthesiology at those hospitals were also contacted and asked several questions including which spinal needle was routinely used in their departments. Results: Of the 123 Emergency Medicine residency programs contacted, 95 (77%) have responded to date. The Anesthesiology departments in each of those hospitals have also responded. Of the 95 Emergency Medicine programs responding, not a single one reported the use of atraumatic spinal needles; Quincke needles were routinely used for all patients undergoing lumbar puncture, regardless of age, in each of these Emergency Medicine departments. Additionally, large bore Quincke needles (18-20 gauge) were used by 67% of these programs. All Anesthesiology departments contacted reported the routine use of atraumatic spinal needles, except in geriatric patients. Discussion: This study confirms previous data which suggests that while Anesthesiologists have embraced the use of atraumatic spinal needles, other subspecialties have not (1). Furthermore, these results confirm our presumption that this problem will continue, since residents in training in Emergency Medicine programs are not being introduced to atraumatic spinal needles. In order to change this situation and improve patient care, efforts must be made by Anesthesiologists to teach our colleagues who may be unaware of the advantages of these needles. Due to our training and practice, Obstetric Anesthesiologists are in an excellent position to influence their colleagues and thus lower morbidity for patients undergoing lumbar puncture outside the operating room. *1. Headache 2001;41:385-390*

## P-102

**EXPANDED ANTIGEN-MATCHING FOR ERYTHROCYTE TRANSFUSION OF WOMEN WITH SICKLE CELL DISEASE DURING PREGNANCY REDUCES TRANSFUSION-RELATED ALLOIMMUNIZATION** *Ramsey, P.S. Winkler, D.D.; Rouse, D.J. University of Alabama at Birmingham, Birmingham, AL* We sought to examine the rate of alloimmunization after transfusion using an expanded antigen-matching program during pregnancy in women with sickle cell disease. For this investigation we reviewed our obstetric database to identify women with sickle cell disease (Hemoglobin SS and SC) who underwent either prophylactic or exchange transfusion of packed red blood cells (PRBCs) during pregnancy from 9/91-8/01. Reason for transfusion (prophylactic vs. indicated), type of transfusion (exchange vs. straight), transfusion reactions and alloimmunization events were recorded. Statistical analysis included the Student's t test and the Fisher exact test. For the 10 year period evaluated, complete transfusion and delivery records were obtained and reviewed for 36 patients (22 hemoglobin SS and 14 hemoglobin SC) with a total of 45 pregnancies (28 hemoglobin SS and 17 hemoglobin SC). These women received a total of 89 antepartum transfusions (mean 6.8 units PRBC per pregnancy). Of these transfusions, 27 (30%) were prophylactic while the remaining 62 (70%) were indicated for sickle cell crisis and/or low hematocrit. Fifty-eight transfusions (65%) were exchange and 31 (35%) were straight transfusions. Four (8.9%) women were alloimmunized at the time of their first prenatal visit. Three of 16 women (19%) between 1991 and 1994 became alloimmunized following indicated transfusions (1 with anti-E and 2 with anti-C) with PRBCs (mean 7.9 units PRBC per pregnancy) matched for D, Kell, Kidd, and Duffy antigens. In contrast, none of the 29 women (0%) receiving PRBC transfusions (mean 6.1 units PRBC per pregnancy) with extended matching (c, C, D, E, e, Kell, Duffy, Kidd) between 1995 and 2001 became alloimmunized during pregnancy ( $p < 0.03$ ). These findings demonstrate that expanded antigen-matching of PRBCs used for transfusion of sickle cell patients in pregnancy significantly reduces the rate of alloimmunization.