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Elevated lidocaine serum levels

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There is increased concern regarding circulating levels of lidocaine immediately after the use of a needle free device. As a result, we conducted a prospective study to assess lidocaine circulation after the use of a needle free device for the delivery of a local anesthetic in 10 healthy adult volunteers. After informed consent, 2 peripheral intravenous (IV) catheters were placed in the antecubital of each arm. 2mg of 1% buffered lidocaine was administered via the needle free device on the dorsum of the volunteers hand by the study physician. Within 2 minutes, a third IV was placed in the location of the lidocaine administration and 5mL of blood was collected from all three sites. If blood samples returned positive for lidocaine, they were also collected 1 hour and 2 hours after administration. Toxic levels of lidocaine were found in blood drawn from two volunteers immediately after lidocaine administration. Results also showed certain volunteers had increasing levels of lidocaine over time. Other volunteers also had increasing lidocaine serum levels from blood drawn farther away from the administration site. We conclude in younger patients transient increases of lidocaine serum levels may be of concern.

Biography

Padma Gulur received her MBBS degree from Bangalore Medical College at Karnataka University in Bangalore, India. She completed an internship in Internal Medicine at Berkshire Medical Center and her residency in Anesthesiology at Boston Medical Center, serving as Chief Resident her final year. Then she completed a fellowship in Pain Management at Massachusetts General Hospital. She is an attending physician at Massachusetts General Hospital, and is Director of the Inpatient Pain Service, Pediatric and Palliative Care Service, and Center for Pain Medicine at MGWest in Waltham. She has published more than 35 papers and abstracts in reputed journals.

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