



## A-128

### Regional Anesthesia In Georgian Obstetrics After Kybele Educational Program

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**Introduction:** In 1998, the use of regional anesthesia (RA) for obstetrics was introduced in the country of Georgia by two small private hospitals, Orioni and Bibida, located in the capital city Tbilisi. Since then, the utilization of RA for obstetrics has been limited due to economic restraints, poor availability of medications and insufficient educational and training resources. In September 2006, Kybele, a non-profit charitable organization, began an educational program (EP) to access and teach obstetric RA techniques in hospitals across the country. The primary goal of Kybele is dissemination of information to improve women's safety during childbirth. Of the visited hospitals, only 3 had limited RA use for obstetrics. These were two private hospitals, Orioni and Bibida, and one municipal hospital, Maternity Hospital #1. Practitioners within these hospitals sought Kybele's partnership to improve obstetric healthcare and hosted Kybele on 2 subsequent visits in February and November 2007. During the past two years, Kybele has continued to foster relationships within the host hospitals to implement improvements in maternal healthcare. In February 2007, Kybele lobbied the health ministry and bupivacaine was approved for national use. Prior to this, 5% lidocaine was the only legally available local anesthetic. This report examines the effect of Kybele's EP on the use of RA in 3 Georgian target hospitals.

**Methods:** The hospitals Orioni, Bibida, and Maternity House #1 (MH#1) were analyzed retrospectively, pre-, interim- and post-Kybele EP. The pre-Kybele period is 2005, the year prior to Kybele's visit. The interim-Kybele period is 2006. The post-Kybele period is 2007. Total number of deliveries, types of analgesia for standard vaginal delivery (SVD), the frequency of cesarean sections (C/S), and types of anesthesia for C/S were analyzed. Statistical analysis was performed with  $\chi^2$  test.

**Results:** The number of deliveries in the pre-Kybele period for all three institutions was 3604, the interim-Kybele period was 4550, and the post-Kybele period was 4988. The C/S rate in each hospital was constant over the three-year period, Orioni's C/S rate ranged from 21-25%, Bibida's between 22-24% and Maternity Hospital #1 from 9-10%. The use of RA for C/S increased significantly in each hospital following the EP ( $p < 0.001$ ) (Table 1). In addition, epidural analgesia significantly increased in 2 of the 3 hospitals ( $p < 0.001$ ) (Table 2).

**Conclusion:** RA for C/S has significantly increased in each target hospital following the 3 Kybele EPs since September 2006. Additionally, both Orioni and Bibida significantly increased the use of epidural analgesia for SVD. Maternity House #1 did not increase epidural analgesia use, possibly due to limited municipal funding and lack of affordability by patients. The increased use of RA for obstetrics is thought to be secondary to Kybele's training and the governmental approval of bupivacaine. Our experience in Georgia reinforces the concept that continuing education in developing countries leads to ongoing changes in clinical practice. Further study is necessary to determine if these changes in maternal care will lead to improved outcomes and increased patient satisfaction in Georgia.

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**Table 1: Regional Anesthesia for Cesarean Section (%)**

	Orioni	Bibida	MH#1	Combined
Pre-Kybele (2005)	7.5	24	27	16
Interim-Kybele (2006)	9.3	29	76*	37*
Post-Kybele (2007)	72*	79*	90*	80*

\*= Statistically Significant (p<0.001) MH#1= Maternity House #1

**Table 2: Analgesia for Standard Vaginal Delivery (%)**

	Orioni			Bibida			Maternity Hospital #1		
	None	IV	LEA	None	IV	LEA	None	IV	LEA
Pre-Kybele (2005)	71	0	29	54	25	21	65	32	3
Interim-Kybele (2006)	64	0	36*	45	27	28	85	12	3
Post-Kybele (2007)	40	0	60*	45	10	45*	92	5	3

\*= Statistically Significant (p<0.001)

IV=Intravenous Analgesia LEA=Lumbar Epidural Analgesia