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ORIGINAL ARTICLE

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Obstetric anesthesia units in Israel: a national questionnaire-based survey

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ABSTRACT
Background: This survey was performed to assess the organization and practice of obstetric anesthesia units in Israel.
Methods: A written questionnaire was mailed at the end of December 2005 to all Israeli anesthesia departments providing labor and delivery services in 2005 ($n = 25$).
Results: A response rate of 100% accounted for 125,340 deliveries. All labor and delivery suites had on-site anesthesia department services. Data are presented as mean (range) or frequency. Eleven hospitals performed 2500–4999 deliveries/year, 6 hospitals 5000–7499 deliveries/year, and 4 hospitals 7500–9999 deliveries/year. The overall cesarean delivery rate was 20% (0–27). Anesthesia for cesarean delivery (elective and emergency combined) was provided by: general anesthesia 15% (0.5–50), epidural 14.5% (0–99.5), spinal 68% (0–98), or combined spinal–epidural technique 0% (0–30). There was an operating room within or immediately adjacent to the labor ward in 16/25 units, including 10/11 units with >5000 deliveries/year. Labor analgesia was provided by epidural techniques in 50% (4–93) and nitrous oxide in 0.5% (0–90) of deliveries. A total of 11 units had 24 h dedicated anesthesiologist coverage, including all units >7500 deliveries but only 3/8 (38%) with 5000–7500 deliveries. Two of the 4 units with >7500 deliveries had no faculty member with formal training in obstetric anesthesia. Written protocols were available for labor analgesia (17/25), post-partum hemorrhage (12/25), aspiration prophylaxis (15/25) and maternal resuscitation (8/25).
Conclusion: In this national appraisal of Israeli obstetric anesthesia services, a notable lack of written protocols, wide variations in staffing, and few specifically trained obstetric anesthesia personnel were observed.

Keywords: Obstetric anesthesia service; Labor analgesia; Cesarean anesthesia; Israel

Introduction

National anesthesia organizations in several countries have developed frameworks for local obstetric anesthesia services.[1,2] These documents provide standards for resident and post-graduate training in obstetric anesthesia,[2] guidelines for specific obstetric anesthesia practices[1,2] and mechanisms to assess guideline implementation.[3] In the UK, a statement delineates acceptable levels of obstetric anesthesia care, such as staffing levels in the labor unit, the timeliness of labor analgesia, and the need to separate elective versus unscheduled anesthesia workloads on the labor unit.[2] A UK national obstetric anesthesia database was initiated to assess the provision of obstetric anesthesia and the incidence of associated complications.[2]

Obstetric anesthesia services in Israel have not been previously described. As such, the Israel Association of Obstetric Anesthesia initiated a national survey of local obstetric anesthesia units. The design and conduct of this survey was intended as an initial step towards the adoption of local guidelines for the provision of obstetric anesthesia and the introduction of a national obstetric anesthesia database.

Methods

A questionnaire was sent to the 25 hospitals within the jurisdiction of the Israeli Ministry of Health in Israel that provide labor and delivery services. The questionnaire[4] contained groups of questions relating to: (1) size of unit and equipment, including dedicated patient controlled epidural analgesia (PCEA) devices; (2) staffing

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for the provision of obstetric anesthesia services; (3) organization of the obstetric anesthesia service; (4) analgesia for labor; (5) anesthesia for cesarean delivery; (6) training of anesthesia residents; and (7) the use of protocols for routine and emergency obstetric anesthesia practice.

Questionnaires were in paper format and requested free text responses. They were mailed to the director

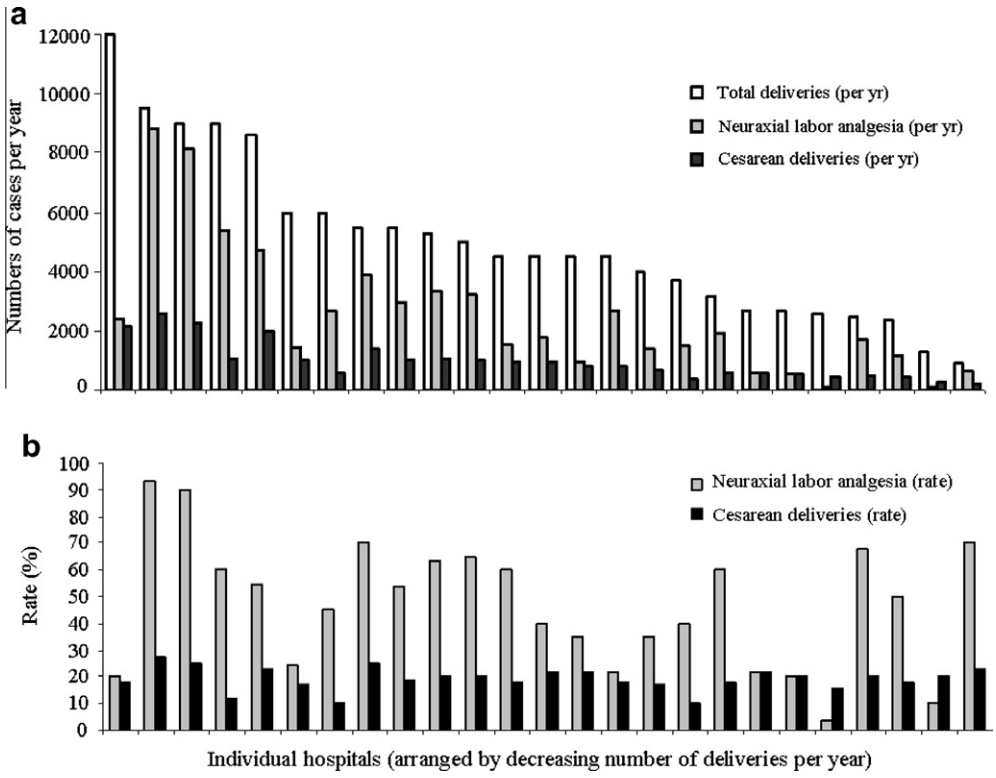

Fig. 1 The 25 labor and delivery units in Israel showing (a) number of deliveries, number of epidurals/spinals for labor analgesia and number of cesarean deliveries; and (b) rate of epidurals/spinals for labor analgesia and cesarean delivery rate.

Table 1 Staffing and the organization of obstetric anesthesia services

	Number of deliveries					
	0–2499 ($n = 3$)	2500–4999 ($n = 11$)	5000–7499 ($n = 6$)	7500–9999 ($n = 4$)	10 000–12 499 ($n = 1$)	Pooled data ($n = 25$)
Dedicated labor ward anesthetist						
24 h	0	3	3	4	1	11
Day shift only	0	2	1	0	0	3
None	3	6	2	0	0	11
Epidural response time (min)	20 (5–30) [13–25]	15 (0–40) [10–20]	10 (5–30) [10–18]	15 (10–30) [14–19]	10	15 (0–40) [10–20]
No. of PCEA pumps/hospital	3 (0–4) [1.5–3.5]	3 (0–10) [0.5–5.5]	5.5 (2–8) [4–7]	8.5 (7–10) [8–9]	0	4 (0–10) [2–7]
OR adjacent to labor ward	1	5	5	4	1	16
QA data						
Anesthesia data	2	7	5	2	1	17
Anesthesia complications	1	3	3	1	1	9

Data are median (range) [IQR] or frequency.