



4143 Clinical cases and complications e-logged on tablets by nondoctor anesthetists in Nepal



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ENHANCING RURAL HEALTH CARE

Introduction

To meet the need for essential surgery across rural Nepal, anaesthesia is still delivered by non-doctor anaesthetist (anaesthesia assistant- AA)^{1,3}. To maintain their confidence and competence², a distance blended learning (DBL) course was delivered to them and they logged all clinical cases they did in one year. These cases are presented here.

Methods

Fourteen AAs working in different districts were enrolled on this course. Cases were uploaded monthly to a database and mentors reviewed all logbook entries. Logbooks and uploads were regularly completed without difficulty; 1% cases were entered incorrectly. Logbook Categories with choices includes

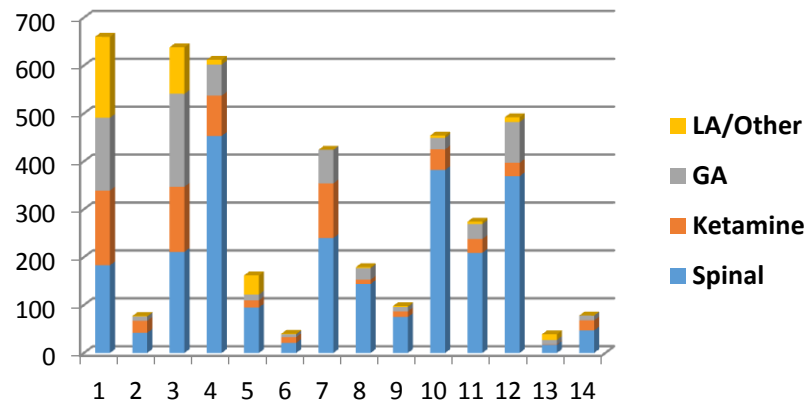
- Date, Hospital Number, Gender, Age, ASA grading, supervisor,
- Routine / Emergency
- Was a PAC done?, PAC Resuscitation Intervention
- Anesthetic Given, Case Description, Complications
- Monitoring, Patient outcome with newborn outcome

Result

A total of 4143 cases were recorded. Majority were spinal, 17% were General Anesthesia. 91% of cases were ASA I, 0.8% ASA III/IV. Pulse oximetry was used in 98% of cases. Complications were recorded in 6% of the cases. Most common complication was hypotension following spinal anesthesia which was managed with fluid and vasopressor. Few airway complication included airway obstruction following ketamine anesthesia, few difficult airway were recorded. Anaesthesia outcomes were good but overall mortality within 24 hours post operative was 0.1% (total 4 deaths); deaths included pre-eclampsia and post-laparotomy.

References

1. B M Shrestha, N B Rana. Training and Development of anesthesia in Nepal – 1985 to 2005. CAN J ANESTH. 2006; 53(4):339-343.
2. Ross O et al. Anesthesia Assistant Follow up and enhancement programme, Nepal 2011 – 2012(Internet). Nepal: Nick Simon Institute; 2012.
3. Maura S, Beverley H. Countries where anesthesia is administered by nurses. Journal of American association of nurse anesthetists. OCT 1996;64(5):469-47.



Complications	No.	Ketamine	GA	Spinal	others
None	3856				
Airway	35	16	15	3	1
Breathing	38	12	5	20	1
Circulation	199 (69%)	7	29	158	5
Drugs	13	1	1	6	1
Equipment	2		2		

Conclusion

A tablet based electronic anaesthesia logbook was successfully used to record cases, complications and outcomes across rural Nepal. Such a logbook can be incorporated into all Continuous Professional Development programs for rural anaesthetist.

Type of cases	Total No.	Emergency	Elective	Type of anesthesia			
				GA	SAB	Ketamine	LA Block
C-Section	1426 (34%)	1110	316	18	1408		
Appendectomy	213	213		53	160		
I&D, Debridement	153	53	100	5	14	126	8
Laparotomy (GI)	69 (1%)	58	11	55	14		
Laparotomy (Gynae)	46	32	14	20	26		
Obstetric other	81	48	33	3	17	58	2
Ortho minor	512	138	374	56	51	246	159
Ortho major	305	59	246	82	160	18	45
Other	1338	178	1160	415	559	264	93
Total	4143	1889	2254	707	2417	712	307

