Reply

The author would like to thank Maj Singh for pointing out the typographical errors. In table 4, the weight of the 9th patient should read 80 Kg. In Table 5 the average no of days for return to work should read 26.9 days.

Routine nasogastric decompression was not carried out in the post op period. However in a small number of patients, intra-op Ryle's

tube decompression of distended stomach was carried out to improve the visual field.

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IS SEDATION NECESSARY DURING SPINAL ANAESTHESIA

Dear Editor,

This is with reference to the article "Midazolam, a new more potent benzodiazepine,, compared with diazepam as sedative during spinal analgesia" [1]. While I am in agreement with the results of the study, but I wish to highlight a few aspects related to sedation during spinal anaesthesia, lest wrong signals may be passed to the less experienced.

The authors have used 0.5% plain (isobaric) bupivacaine and thus managed to maintain a predictable lower level of blockade till T10. The more commonly used solution of bupivacaine for spinal anaesthesia is 0.5% hyperbaric solution and it is known to cause higher spread compared to isobaric solution [2,3,4]. Moreover there is always unpredictability about the level of spread as it is dependent on many factors like dose, volume and basicity of the drug position of patient during and after injection, interspace used etc. Hence sedation during higher level of spinal block may be hazardous due to combined effects of high block and sedation. In a retrospective study of 14 cases of unexplained cardiac arrest during spinal anaesthesia, Caplan et al [5] revealed that all of them had received intraoperative sedation. It has also been proved that patients having high spinal anaesthetic are more sensitive to sedative effect of Midazolam [6]. Midazolam has a depressant effect on respiratory responses to hypercarbia and hypoxia [7,8]. This effect may be more obvious or aggravated in compromised patients.

In view of the above following suggestions are made :-

(a) Sedation during spinal anaesthesia should not be generalised. A carefully selected and motivated patient feels more comfortable and reassured without sedation (personal experience).

(b) Occasional deep breath on command in an awake patient compensates for the decrease in oxygen saturation, This also acts as an additional safeguard.

(c) Patients with cardio-respiratory problems will need closer

supervision intraoperatively. Oxygen inhalation by nasal prongs via oxygen concentrator would be ideal.

(d) The unpredictability about height of block and its consequences should be kept in mind intraoperatively. The sedation if required should be restricted to infraumbilical blocks.

References

1. Suri Y, Lamba NS. Midazolam, a new more potent benzodiazepine, compared with diazepam as sedative during spinal analgesia, A randomised double blind study. *MJAFI* 2000;56:29-32.
2. Chambers WA, Edstrom HH, Scott DB. Effect of basicity on spinal anaesthesia with bupivacaine. *Br J Anaesth*. 1981;53:279-82.
3. Bannister J, McClure JH, Wildsmith JAW. Effect of glucose concentration on the intrathecal spread of 0.5% bupivacaine. *Br J Anaesth* 1990; 64:232-4
4. Murlidhar V, Kaul HL. Comparative evaluation of spinal anaesthesia with four different bupivacaine (0.5%) solutions with varying glucose concentrations *J Anaesth Clin Pharmacol* 1999;15:165-8.
5. Caplan RA, Ward RJ, Posner K, Cheney FW. Unexpected cardiac arrest during spinal anaesthesia : a closed chains analysis of predisposing factors. *Anaesthesiology* 1988;68:5-11.
6. David BB, Vaida S, Gaitini L. The influences of high spinal anaesthesia on sensitivity to Midazolam sedation. *Anesth Analg* 1995; 81:525-8.
7. Forster A, Morel C, Bachmann M, Gemperle M. Respiratory depressant effects of different doses of Midazolam and lack of reversal with naloxone : double blind randomized study. *Anesth Analg* 1983;62:920-4.
8. Forster A, Gordaz JP, Suter PM, Gemperle M. Respiratory depression by Midazolam and diazepam. *Anaesthesiology* 1980;53:494-7.

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Reply

Dear Editor,

Thanks for your interest in our scientific article Midazolam, a new more potent benzodiazepine compared with diazepam as sedative during spinal analgesia - a randomised study [1]. Bupivacaine isobaric 0.5% solution can be used to produce predictable level of subarachnoid block tailored to the needs of the patients [2]. Haemodynamic changes can be prevented with preload of one litre intravenous colloids prior to subarachnoid block. Sedation during spinal analgesia is desirable demand by majority of the patients was confirmed in our pilot study [3]. Sedation during high spinal >T4 level needs careful approach and monitoring of the patients irrespective of the sedative drug to be used. Our study included patients undergoing surgery to the lower abdomen, perineum or legs under spinal analgesia. The suggestions made by Lt Col KC Khanduri are practised by all the anaesthesiologists during regional block tech-

niques of anaesthesia in service hospitals and civil medical institutions.

References

1. Suri Yudhvir, Lamba NS. Midazolam, a new more potent benzodiazepine, compared with diazepam as sedative during spinal analgesia, a randomised double blind study *MJAFI*, 2000, 56:29,32.
2. Bannister, J; McClure, JH, Wildsmith, JAW; Effect of glucose concentration on the intrathecal spread of 0.5% bupivacaine. *Brit J Anaesth*, 1990, 64:232-4.
3. Suri Yudhvir, Lamba NS. Pilot study : sedation during spinal analgesia (Unpublished).

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