FREQUENCY OF PERSISTANT BACKACHE IN PATIENTS OF SPINAL ANAESTHESIA IN THE ABSENCE OF PRIOR HISTORY OF BACKACHE

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ABSTRACT

Objective: To determine the frequency of persistant backache in patients of spinal anaesthesia in the absence of prior history of bachache.

Study Design: Quasi experimental study.

Place and Duration of Study: CMH Kharian from May 2008 to Sep 2009.

Methods: Total 150 patients who were admitted at CMH Kharian during the study period were included in the study. The selection criteria included male and female patients above twenty years of age due for elective gynaecological, orthopaedics, urology and general surgical procedures. Only 112 patients reported for complete follow up for one year. Out of 112 patients, 61.6% were males while 38.4% were females. All patients with prior history of back pain were excluded from the study.

Results: At the end of one year the frequency of persistent back pain after one year of spinal anaesthesia is (1/112) 0.89% in the absence of previous history of back pain.

Conclusion: The results of this study indicate that frequency of persistant back pain after spinal anaesthesia in the absence of previous history of back pain is very low.

Keywords: Spinal anaesthesia, subarachnoid, persistent back pain.

INTRODUCTION

Spinal anaesthesia is used very frequently in the anaesthetic practice and is very useful alternative of general anaesthesia especially for surgery below umblicus in lower limbs and perineum.

Back pain is a relevant public health problem[1]. It seems appropriate to evaluate whether or not spinal anaesthesia is associated with persistent back pain especially in view of public health costs. It is also important to differentiate between back pain and transient neurological symptoms. Transient neurological symptoms are described as unilateral or bilateral pain or dysthesia with radiation into buttock, thighs, calves or legs as defined by Hampl et al[2].

Data on long term back pain after spinal anaesthesia (both for obstetric and non obstetric surgical cases) is sparse[3]. It is also an important fact that in any one year more than half of the population will suffer from back pain on at least one occasion and that 10-15% of these patients will go on to develop chronic back pain[4]. So the problem of persistent back pain after spinal anaesthesia should be discussed with the patient during the preoperative evaluation. Virtually all papers evaluating back pain after spinal anaesthesia have focused on short term (post operative day 1-7) incidence of either transient neurological symptoms or back pain but not on the persistent back pain or the association with pre existing back pain. That is why it is important that incidence of persistent back pain be assessed in patients with pre existing back pain

MATERIAL AND METHODS

After approval from the hospital Ethics Committee, this study was carried out in Combined Military Hospital Kharian from May 2006 to September 2007. Selection Criteria included male and female patients above twenty years of age due for elective surgical procedures like gynaecological , orthopaedic, urologic and general surgery. Haemo dynamicaly unstable, having impaired coagulation profile and patients with marked spinal deformities or local sepsis at lumbar spine were excluded. A quasi experimental study was carried out on 150 patients who were admitted at CMH Kharian from May 2006 to

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September 2007. Only 112 patients reported for complete follow up for one year. The number of male patients was 69 (61.6%) while 43 (38.4%) patients were female.

Patients were briefed about spinal anaesthesia and consent was obtained for spinal anaesthesia. They were premedicated with injection Midazolam 1.5 mg intravenously before shifting them to operation theatre. Patients were pre loaded with 500ml of colloid solution (6% Hetastarch). Standard monitoring was done with continuous Electrocardiogram, non invasive blood pressure monitoring (NIBP) and pulse oximetery.

Patients were positioned in either sitting position or lateral decubitus position. Skin was prepared with pyodine solution and draped with sterilized sheets. Two milliliter of 1% lignocaine plain was used to infiltrate L4-L5 or L3-L4 intervertebral space. For spinal anaesthesia lumbar puncture was performed with 25 guage Quincke back spinal needle. Presence of spinal needle in subarachanoid space was confirmed by free flow of cerebrospinal fluid. Hyperbaric bupivacain 0.75% 1.5 ml -2 ml was injected in subarachanoid space to attain spinal anaesthesia.

Sensory block was assessed 5-10 minutes after spinal anaesthesia with the help of hot & cold temp test while motor blockage was assessed by the toe movements. Surgical procedures were started ten minutes after administration of spinal anaesthesia. Intraoperatively patients received lactated ringers solution as i/v fluid. At fifth post operative day patients proforma was filled and were questioned for back pain after spinal anaesthesia and were requested to report for follow up after three and twelve months. Pain was assessed by Visual Analog Scale(VAS) on a ten centimeter long line with no pain on one end and severe pain at the other end .At the end of one year they were also asked about their choice of anaesthesia for similar surgical procedure in the future if required.

Patients pointing between 4-10 cm on VAS were labeled "yes" on questionnaire proforma for presence of back pain. While patients pointing between 0-3 cm on VAS were labeled as having no back pain. Those patients who reported back pain after one year of spinal anaesthesia were labeled as having persistent back pain after spinal anaesthesia. At the end of one year of study all the data had been entered in SPSS 11 for analysis. Descriptive statistics were used to describe the data. Chi-square test was applied for the comparison of qualitative variables. p-value<0.05.

RESULTS

In this study total 112 patients were included out of 69 (61.6%) were males while 43 (38.4%) were females. Minimum weight of the patient was 49 kg while maximum weight of the patient was 91 kg.

In this study 2.3% of females and 9.5% male patients reported with persistent back pain at the end of one year. Eleven (9.8%) patients presented with back pain on the 5th post operative day and 14 (12.5%) patients after three months of spinal anaesthesia. At the end of one year of the study patients still complaining for back pain after spinal anaesthesia were 12(10.7%). Out of these twelve patients, eleven patients had previous history of back pain.

Pearson chi-square test revealed significant association between post spinal anesthesia, persistant backache and previous history of backache (p=0.0001). Patients satisfaction after experience of spinal anaesthesia, revealed 90% patients being satisfied and waiting for spinal anesthedia in future whenever required.

DISCUSSION

Spinal anaesthesia is used very frequently in anaesthetic practice, especially for surgery below the umbilicus, in lower limbs and perineum. Back pain is a relevant health problem[1]. It is also important to differentiate back pain and various transient neurological symptoms[2].

In this study the patients with previous history of back pain were 11 (17.9 %) which is comparable with the study of Manning DC et[4]. In our study 150 patients were included who had undergone spinal anaesthesia for surgical procedure. But at the end of one year 112

patients reported for follow up. The response rate is 74.66% which is comparable with that found by Fritz and Seidlitz et al[5].

Various studies have tried to find out the exact etiology for back pain after spinal anaesthesia to determine if lumber puncture is actually responsible for back pain. Goldmann R et al [6] have demonstrated that back pain after spinal anaesthesia was caused by bedding after sacroiliac joint blockage and was not caused by spinal anaesthesia.

In our study at the very first visit, patients were asked about previous history of back pain before giving them spinal anaesthesia so that post operative complaint of back pain should not be attributed to spinal anaesthesia. Wilder-Smith OH and Gurtner T7 in their study found the incidence of post spinal back pain in 13.1% cases. They found that post spinal morbidity can be reduced by the use of atraumatic technique and with small guage spinal needles for performing lumber puncture. But they did not compare the previous history of back pain and post spinal back pain.

In order to study the long term effects of spinal anaesthesia especially persistent back pain we asked the patients to report after three months of spinal anaesthesia and then after one year of spinal anaesthesia. Therefore we believe that results and conclusion of our study regarding the incidence and predisposing factors after spinal anaesthesia are more appropriate.

The mean incidence of back pain in studies primarily dealing with short term back pain 8-12 days was 15.4% which is comparable to incidence of back pain found in my study as 9.8% after five days, 12.5% after three months and 10.7% within one year of spinal anaesthesia.

Our study also finds that the incidence of new cases of persistent back pain is only 0.89% (1/112) after one year of study which is comparable with the incidence of persistent back pain after spinal anaesthesia in the study by K. Schwabe et al[13]. But they did not include obstetrical cases while in our study obstetric surgical procedures are not excluded. Their study also shows that only 9.8% (11/112) of patients after one year of spinal anaesthesia replied that they would not opt for spinal anaesthesia as first option for any surgical procedure in future. While 90.2% (101/112) patients in our study replied that they would opt for spinal anaesthesia in future if required. This shows that most of patients do not link their post operative complaints of low back pain to spinal anaesthesia. Viitanen H et al[14] studied post partum neurological symptoms following single shot spinal block for labor analgesia. They investigated the complaint of post dural puncture headache and back pain after two weeks of spinal anaesthesia. They found incidence of new onset back pain as 13% which is quite high as compared to our study which is 0.89% after one year of study without previous history of back pain. This difference can be due to their short study period. Despite these results only 1% mothers told that they would not want to receive further spinal block. This high acceptability is comparable to our study.

Salmela L et al[15] studied leg and back pain involving hyperbaric 5% lignocain and incidence of leg and back pain after recovery from anaesthesia was 24%. This is very high as compared to our study which may be due to their non specific study period while in our study this period is one year. Moreover we used 0.75% bupivacain while they used hyperbaric 5% lignocain for spinal anaesthesia. So this may be the reason of this gross difference.

We should keep in mind some other rare causes of back pain after spinal anaesthesia as Barak M[16] reported a case of back pain after spinal anaesthesia and the cause was retroperitoneal hematoma. Our study focused on persistent back pain after spinal anesthesia which cannot be due to these rare causes.

CONCLUSION

The results of this study indicate that back pain after spinal anaesthesia in the absence of previous history of back pain is not significant. So it is not justified that patients with previous history of back pain should be denied spinal anaesthesia.

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