Orginal Article

Post-Operative Restlessness During Recovery Period Following General Anaesthesia

Ali MR[1], Adam S[2], Khan K.R[3], Imran ZA[4]

Abstract

Background: *Smooth induction and smooth maintenance, smooth reversal and quite recovery is a key word in general anaesthesia. All anaesthetist desires that his patients wake-up smoothly & quietly. However the matter is not easy at all. Anaesthetist often faces a bitter experiences & awk.ward situation during recovery from anaesthesia.*

Objective: *To detect the degree & frequency of restlessness in various types of patients of different age & sex groups and in different types of operations.*

Methodology & Materials : *Our study was carried out in North Bengal Medical College Hospital, Sirajgonj, in between July/2014 & December/2014. 60 (sixty) patients were chosen of different age & sex group and of different types of operation for this perpous.*

Results: *Our study shows that the patients of E.N.T. surgery & the patients of Paediatric surgery, were most vulnerable & responded badly, during reversal and in the post operative ward. Among others a few of them developed restlessness due to some other cause. The children were more prone to develop restlessness than the adults. The Orthopaedic surgery patients also responded badly during recovery period.*

Conclusion: *Special attention should given to this matter as it is really a hazardous situation to all; (i.e. anaesthetist, surgeon, O.T. Sister). An adequate pre-medication,smooth induction, quiet maintenance, smooth reversal & a suitable post operative analgesic is absolutely necessary. Pre anesthetic visit & close rapport with the patient is also essential to overcome this situation.*

Key words: *Pre-medication, Smooth induction, Smooth reversal, Hypotension, Cerebral ishcaemia.*

Introduction

Postoperative restlessness always deserves careful consideration. It may be due to one or more of a variety of causes. Common causes include increased afferent input to the brain from the pain of surgery, or from other discomforts such as a full bladder, a tight wound dressing or an infusion that has tissued. This, combined with cerebral depression due to the drugs used during anesthesia, may prevent a rational or useful response by the patient, resulting in agitation and restlessness. It may also be due to cerebral confusion due to drugs, cerebral hypoxia or to lack of orientation due to unfamiliar surroundings, e.g. eyes being bandaged or ears covered. Agitation in the postoperative period may be a result of inability to co-ordinate movements properly due to the residual effects of neuromuscular blocking agents.

Materials and methods

Our study was carried out in North Bengal Medical College Hospital, Sirajgonj, in between July/2014 & December/2014. I have selected 60 patients of which 10 ware Pediatrics Surgery, 15 ware E.N.T, 15 ware general Surgery 10 were Orthopedic Surgery & 10 were Gynecology & Obstetric Surgery, those who developed post operative restlessness, in spite of proper pre-medication. Data shows that the pediatric Surgery &

1. Dr. Md. Rashid Ali, Associate Professor, Department of Anaesthesiology, North Bengal Medical College, Sirajgonj.
2. Prof. Shamim Adam, Professor, Department of Orthopaedic Surgery, North Bengal Medical College, Sirajgonj.
3. Dr. K.R Khan, Assistant Professor, Department of E.N.T, North Bengal Medical College, Sirajgonj.
4. Dr. Zahir Al-Imran, Medical Officer, Dashmina UHC, Patuakhali.

E.N.T. Patients were most vulnerable. All most all developed moderate to severe degree of restlessness either from any cause, of the orthopaedic patients a few developed restlessness from mild to moderate degree. Other groups of patients responded well to general/ spinal Anesthesia. Although they developed more or less degree of restlessness, came under control very soon. For monitoring, pulse-oxymeter,E.C.G machine,caphnograph,& B.P mechine, were used accordingly.

Results

Our Study shows that the patients of E.N.T & the patients of paediatric surgery, were most vulnerable & responded badly during reversal in post operative ward. Among others, a few of them developed restlessness. The children were more prone to developed restlessness. The table and data shows the details.

Development of Restlessness					
Nam of the operation	Male		Female		Pediatrics
	Age groups		Age groups		Age groups
	18 to 40 yrs	40 to 60 yrs & above	15 to 40 yrs	40 -60 yrs & above	5 to 12 yrs
Cholecystectomy	(++)	(+)	(++)	(+)	-
Nephrectomy	(+)	(++)	-	(+)	-
Prostatectomy	-	(+)	-	-	-
Gastro - Jejunostomy	(+)	(+)	-	(+)	-
Appendisectomy	(+)	-	(+)	-	(+)
Open Reduction	(+)	(+)	(+)	(+)	(++)
Prosthesis	(+)	(++)	-	(+)	-
I/M Interlocking	(++)	(+)	(++)	-	-
Caesar ian Section	-	-	(++)	-	-
Hysterectomy & others	-	-	(+)	(++)	-
Tonsillectomy	(+++)	-	(+)	-	(+++)
S.M. R & others	(++)	(+)	(++)	(++)	-
Ophthalmic operations	-	-	-	-	(+++)

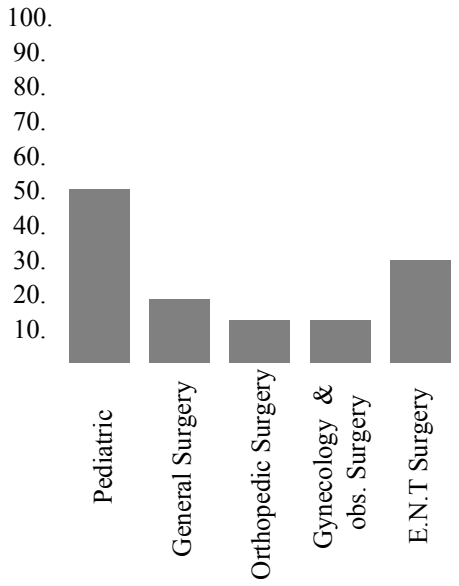
(+) : Mild restlessness

(++) : Moderate restlessness

(+++) : Severe restless

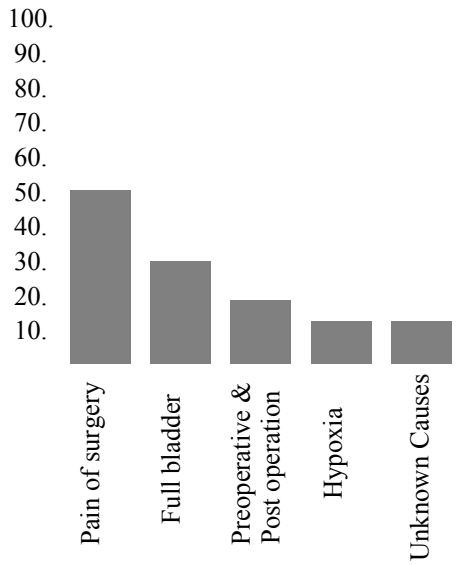
DATA - 1

Types of surgery - Percentage of Restlessness in various type of operation:



DATA – 2

Underlying causes of Rest less ness.



Discussion

Before making the easy and most likely diagnosis that the cause of the restlessness is the pain of surgery and necessitates administration of an opiate drug, it is essential to be quite certain that there is no element of hypoxia, airway obstruction or hypovolaemia. To give an opiate to a patient who is hypoxic or hypovolaemic postoperatively may reduce the restlessness but it will dangerously increase the hypoxia and may worsen hypotension.

There is little doubt that the administration of opiates to patients with postoperative hypoxia or hypovolaemia, especially if due to hemorrhage, in the belief that their restlessness was due to pain has caused patient deaths. A pulse oximeter is useful in making the diagnosis of hypoxia but unfortunately oxygen saturations less than 98 percent are common in the postoperative period and do not necessarily indicate respiratory depression. In the presence of pain, ventilation is often increased and vasoconstriction may occur, making pulse-oxymeter readings difficult to interpret. However, should the oxygen saturation fall below 90 percent following an opiate, the patient should be carefully monitored and given added inspired oxygen. It may become necessary to administer naloxone to reverse the action of the opiate drug. This is often associated with a return of pain.

Usually the diagnosis of postoperative hypoxia will be made on clinical grounds laboured, obstructed breathing, tracheal tug, poor respiratory excursion and low tidal volume and a failure to breath deeply on command. The colour of the patient may indicate hypoxia but as most post-operative patients, and especially those who are restless, will be receiving oxygen supplementation, hypoventilation and respiratory obstruction may not produce significant desaturation. The pulse, blood pressure, skin perfusion and temperature may indicate hypovolaemia which is often associated with concealed blood loss in the postoperative phase.

Restlessness due to drugs, especially if combined with a disorientating experience, such as waking up with eyes bandaged or nasal passages obstructed, may occur, especially in the elderly. In these patients further depressant drugs merely delay their recovery. The treatment should be symptomatic to prevent patients from hurting themselves whilst an explanation of their condition is repeated in an effort to orientate them Postoperative confusion due to drug withdrawal or in an alcoholic does not usually manifest itself until 12h after the procedure.

Restlessness due to incomplete reversal of neuromuscular blockade can be detected using a nerve stimulator. Clinically restlessness is associated with jerky uncoordinated movements, the use of the frontalis muscles to open the eyes and the inability to raise the head off the pillow for 30s. This cause of postoperative restlessness should be managed. When all other causes of restlessness have been eliminated it is reasonable to conclude that the agitation is due to pain. Before an opiate is administered it should be determined that the pain is from the operative site and is not a warning sign of some imminent surgical complication such as bleeding into a tissue space, too tight a bandage or swelling of a limb encased in plaster. The patient's bladder should be percussed and felt to make sure that a full bladder in not the reason for agitation. Only when one is confident that pain due to the operative wound is the cause of the patient's restlessness should a postoperative analgesic be administered.

If an opiate analgesic is chosen, the dose administered should be adequate to control the patient's pain but not to cause undue respiratory depression in the unstable postoperative period. The dose may be difficult to predict and therefore the common practice of prescribing postoperative medication before the operation is be deprecated. If there is doubt as to the does of analgesic it is reasonable to administer it in divided doses intravenously, waiting 3-5 min between doses to observe the effectiveness of the analgesia and the degree of respiratory depression produced.

Conclusion

Post operative restlessness of any cause & of any groups demands careful attention. The patients of such cases should be dealt with sympathetically & rough handling while shifting the patient to the post operative room should be avoided in all cases. The patient needs careful observation & special attention. More over an adequate pre-medication, smooth induction, quite maintenance & adequate reversal of anesthesia is a mandatory. More over proper & sympathetic nursing care is essential to avoid dangerous complications of restlessness. A close rapport with patient is essential. Hypoxia, Hypovolaemia & Hypotension should be avoided at any cost as these may cause Cerebral ishcaemia which enhances restlessness.

References

1. CEACCP Oxford Journal,by J.B.Whiteside-2005,Page:129-31, 147
2. ASA Journal, by Alfred Brown-1998, Page: 87-89
3. International Journal of Obstetric Anesthesia,Vol-5(1998),by J.B Whiteside,
4. American Journal of Obstetric & Gynaecology, by Frederic P.Zuspan & John I Brewer, Page:1332-37, 1605. & by RobertA.Wild, Page: 790, 884.

5) NYSORA-The New York Journal of Anesthesia, by Admin (2001), Page:32-33.

6) AAOS- Anesthesia for hip & knee Surgery, by Robert J.Glymn, Page:71-72, 114.

7) Understanding Anaesthesiology,by-S.Ahanatha Pillai,2nd Edition, page: 79-81

8) A Text Book of Anaesthesia:by Aitkenhead & Smith, 3rd Edition, page: 424-25

9) Clinical Anesthesia, by- Eric Morgan, 4th Edition, page: 533-34

10) A WFSA Manual of Paeditriac Anaesthesia - 1992, page: 30-31