further tightens on traction during retrieval.[5]

Insertion of larger diameter and necessary length of NGT, determined by measuring distance from the nostril along the side of the face past the ear to the xiphoid process, may minimize this complication. Whenever any difficulty occurs during mobilization of NGT, the possibility of knot formation should be kept in mind as blind traction can result in catastrophic consequences. If any doubt exists, the position of NGT should be checked by a radiograph.[5]

This case illustrates that a simple procedure like insertion of a NGT can have potentially serious consequences.

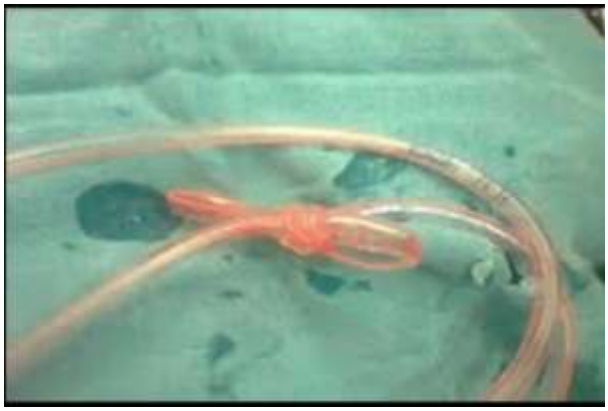

Figure : Knotted Nasogastric tube

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Perioperative concerns in patients with 'white coat hypertension'

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Hypertension is quite common nowadays. It affects more than 1 billion people worldwide. It is estimated that 60% of world adult population is hypertensive as defined by 'The World Hypertension Society/International Society of Hypertension (WHO/ISH).[1] Many patient may present for surgery with uncontrolled or inadequately treated hypertension. The perioperative risk of myocardial infarction, ischemia, stroke, arrhythmia, renal failure etc. are drastically increased in this category of the patients. 'White coat hypertension (WCH) is an unique entity, in which there is rise of BP noted in patients who are normotensive in non-medical settings, but develop hypertension on entering in a medical facility.[2] In such situations there is a dilemma whether to postpone the surgery or go ahead with it.

We came across two such patients scheduled for elective surger; both were non hypertensive but pre-operative BP recordings were very high. First patient was a 65 year old male, ASA grade 1, posted for TURP.

Though he did not complain of any anxiety or apprehension, his vital signs showed wide fluctuations when recorded in operating room, compared to the readings taken in the ward.

The second patient was 25 year old young male, ASA grade 1, posted for surgery for pilonidal sinus. He complained of severe anxiety on seeing a doctor. He was scheduled to undergo excision and flap advancement. His preoperative evaluation and investigations (biochemical and hematological) were unremarkable. ECG showed heart rate of 70 bpm and normal rhythm. During preanesthetic checkup a day prior to surgery, the patient looked very anxious. His pulse was 140 bpm, regular and BP 150/100 mmHg. On asking about anxiety the patient responded in positive and stated that he is frightened of medical professionals especially when they are performing their acts like examining the patient. Psychological counseling was done and premedication was given in the form of tablet diazepam 5 mg at night and 2 h preoperatively. On the day of surgery there his vital signs recorded by nursing staff were pulse-80 bpm and BP-110/70 mmHg; in the operating room readings were pulse-120 bpm and BP-150/110 mmHg. Considering his apprehension and anxiety (VAS score for anxiety was 9) and fluctuating vitals, general anesthesia was planned. Standard anesthesia protocol comprising of midazolam, thiopentone, fentanyl, vecuronium and isoflurane in oxygen and nitrous oxide was followed. Rest of the perioperative period was uneventful. Postoperative psychiatric consultation was sought and he was prescribed anxiolytics for a fortnight.

The term "white coat hypertension", also known as alerting phenomenon, was first used by Pickering in 1988. It is defined as an elevated office BP and normal ambulatory BP. Although typically described as occurring during measurement by a physician, it can also occur during measurement at home in 20-40% of subjects with elevated office BP. The common etiology is exaggerated response to anxiety.[2,3]

Our patient was a typical presentation of WCH and there was overt exhibition of anxiety. The anxiety may be high even in minor surgical procedures like dental treatment.[4] The causes are multifactorial like fear of pain and apprehension for the successful outcome of the surgery. Allaying preoperative anxiety is of paramount importance in anesthesia practice.[5] Non-pharmacological modalities include psychotherapy, acupressure and music therapy, while pharmacological treatment encompasses various drugs like benzodiazepines (diazepam, midazolam), alpha-2 agonist (clonidine), gabapentin and melatonin.[5,6] Despite best treatment the hypertension may not resolve and it is prudent to avoid regional anesthesia and opt for general anesthesia. Our patients were wide apart in their demography as well as in their clinical symptomatology, hence the anesthetic management was different for them and tailored as per requirement.

Adequate control of hypertension deems necessary prior to elective surgery. Thus, hypertension is one of the major cause of postponement of surgery.[7] WCH should be ruled out or else the patients will be subjected to unnecessary investigations. The treatment of WCH has engendered considerable controversy. It would seem unnecessary and perhaps harmful to prescribe antihypertensive drugs if home readings are normal as the treatment would confer the risks of iatrogenic hypotension. Whereas, stratification of cardiovascular risks in WCH has shown that if office BP is persistently elevated, there is abnormal long term mortality risk.[3] Moreover, inflammatory markers like procalcitonin and C-reactive protein were significantly higher in WCP than in normotensive group. Hence close monitoring of BP is very crucial.

WCH is not an uncommon presentation for anesthesiologists since multiple aggravating factors plat their role in the operating room, e.g. presence of unknown staff and physicians, abnormal operating room environment, fear of pain or death or outcome etc. Although, considered to be benign, the associated cardiovascular risks cannot be underestimated. Therefore, one should have thorough knowledge of its pathogenesis to effectively manage it and have good patient outcome.

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Pseudohyperkalemia in infants: A reason to postpone the surgery?

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Measurement of serum potassium is not indicated routinely in infants undergoing surgery. It is indicated in some particular conditions, like in patients with vomiting, diarrhoea, ileostomy, colostomy, burns and diuretic therapy. The most common cause of hyperkalemia in infants is pseudohyperkalemia. Sometimes, values of potassium may be falsely elevated and it becomes a dilemma for anesthesiologist.

Laboratory results are the basis of 60-70% of clinical decisions. Potassium is one of the most commonly tested investigation. 32-75% of laboratory errors occur before analysis of the sample i.e. during collection, especially in infants. During the analytical phase, 4-32% of all laboratory errors occur.1

In vitro hemolysis can take place at the time of collection of sample due to a difficult venipuncture, narrow gauge needles and because of extremes of temperature at the time of transport and storage. This hemolysis leads to pseudohyperkalemia as a result of release of potassium from erythrocyte cytosol. This increase in levels of potassium is directly related to plasma Hb concentration. To derive the actual potassium level, a correlation factor of 0.00319 × plasma Hb (mg/dL) has been devised.2

Pseudohyperkalemia in infants should be suspected when the laboratory value of the measured potassium is high but the patient doesn't manifest signs of hyperkalemia such as weakness, confusion, muscular and respiratory paralysis and abnormal electrocardiogram and surgery need not be postponed in such cases.

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