

Preoperative Fasting in Patients for Elective Surgery is Double the Normal Maximum Time in Government Hospitals – it needs some attention to reduce it.

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This study was carried out on two hundred patients divided into two groups, each comprising hundred to compare “nothing per oral duration in patients undergoing elective surgery in government and private hospitals”. NPO duration in government hospitals ranged 8 to 19 hours mean 12 hour while in private hospitals NPO duration ranged 4 hour to 10 hour while mean duration was 7 hour. It was seen that NPO duration in patient for surgery in government hospitals was far in excess than recommended and twice than maximum recommended NPO time. The reason for this increase in NPO duration was long list of patients undergoing surgery in government hospitals. The second reason seemed to be that patients appeared to be commencing their NPO long before nil by mouth status was imposed by ward staff. This prolonged NPO duration adds psychological stress to the patients and their relatives. This could be harmful to the hypertensive, ischaemic heart disease and diabetic patients. It is suggested that patients should be explained in detail when to fast exactly and operation list should be planned according to number of operation tables and surgeons availability.

Key words: NPO, elective surgery, government hospitals

Preoperative fasting has been matter of controversy ever since James Simpson, in 1842, blamed aspiration of brandy for the first death under chloroform Anaesthesia¹. Aspiration has been long established as an important cause of morbidity and mortality related to anaesthesia².

The purpose of fasting guidelines for healthy patients undergoing elective surgery is to minimize the volume of gastric contents to prevent vomiting, regurgitation and aspiration pneumonitis under Anaesthesia while avoiding unnecessary thirst and dehydration³.

The earliest books of Anaesthesia did not mentioned fasting. In 1883, the famous surgeon Lister recommended that there should be no solid matter in the stomach, but patients should drink clear fluid about two hour before surgery⁴.

For the next 80 years until 1960, the most textbooks recommended six hours for solid and two to three hours for clear fluid. During 1960, in North America, the preoperative order “nothing by mouth after midnight” was applied to solids as well as liquids. This change was accepted without any reason at that time. Later, many studies confirmed that volume of gastric content after midnight averages 20-30ml. Clear fluid empties exponentially 90% within one hour and virtually all within 2 hours. Total emptying time of a meal normally is 3-5 hour⁵. So NPO duration before elective surgery, 4-6 hours for both solid and liquid is appropriate because gastric volume is minimum and it causes less dehydration and stress response to the patient. But in government hospitals where there is a long busy list of operations, the NPO

duration was far more than normal and in private hospitals number of operations per day is far less. This study was carried out to determine the NPO duration in patients undergoing elective surgery in government and private hospitals.

Method and material:

All patients admitted for elective surgery in any surgical departments of government and private hospitals were included in the study. Study Proforma was duly completed and detail of length of NPO for solid and liquid was recorded. Patients coming for emergency surgery and below ten year were excluded. At the completion of study analysis was done by SPSS 8.0

Results

This comparative randomized descriptive study was done on two hundred patients divided into two groups each comprising hundred patients undergoing elective surgery in government and private hospitals. In government hospitals patients aged 10-85 years mean 41 years, of whom 46(46%) were male and 54(54%) were female. 81 patients were classified as ASA-I and 19 as ASA-II. NPO duration ranged 8-19hour and mean time 12 hours with SD±2.35.

While in private hospital patients aged 12-76 years mean age 35 year of whom 54(54%) were male and 46(46%) were female. 62 patients were classed as ASA-I and 38 as ASA-II. NPO duration ranged 4-10 hour and mean NPO duration was almost seven hour with SD± 1.22

Comparison of nothing per oral duration in patient's undergoing elective surgery in Government and private hospitals

Hosp	Pt. No.	ASA Status		Sex ratio		Age				NPO Duration			
		I	II	M	F	Min	Max	Mean	Median	Min	Max	Mean	SD hour
Govt.	100	81	19	46	54	10Y	85Y	41Y	36Y	8h	19h	12h	±2.35
Private	100	62	38	54	46	12Y	76Y	35Y	38Y	4h	10h	7h	±1.22

Discussion:

In spite of introduction of clear guidelines for preoperative fasting to reduce anaesthetic risks, the mean length of fasting of both solids and liquids in patients undergoing elective surgery remains far in excess of recommended maximum. The guidelines are, "food should be withheld for 6 hours and clear fluids for 3 hours before an operation in adult. Excessive starvation and dehydration are to be avoided especially in children who may suffer dangerous hypoglycaemia⁶.

Regarding this, one study was done by Pearse R to determine NPO duration in one fifty three patients. Mean NPO times in his study for solids and liquids were 15 hours and 34 minutes and 12 hour and 30 minutes respectively⁷. He selected all of his patients from government hospitals but in our study, NPO duration for both solids and liquids was the same. In our government hospital groups the mean NPO time was the same as NPO time for liquids of Pearse's study. But we have compared the NPO duration in patients for elective surgery in government and private hospitals. In private hospital patients mean NPO duration is 7 hour and is slightly more than standard NPO time while in government hospitals the mean NPO time for elective surgery patients was 12 hours which is double than the normal standard NPO time. The reason for this prolonged NPO duration in patients for elective surgery in government hospitals was the same as Pearse described in his study. First the most important is long busy operation list. Secondly the patients start their fast long before "nil by mouth status is imposed by staff ward⁷.

While in most of the private hospitals operation list is very short and the patient is explained in detail about NPO

time. Prolonged NPO duration have psychological stress on the patients and their relatives. It causes more dehydration and increases the gastric volume and incidence of vomiting is increased in these patients⁸. Also prolonged delay in surgery have a very harmful effects on patients of IHD, hypertension and diabetes mellitus.

In conclusion patient should be explained in detail when to fast exactly and operation list should be planned according to operation tables and surgeons availability.

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