EFFECT OF HEALTH EDUCATION ON ANXIETY OF PATIENTS UNDERGOING EMBOLISATION

PROJECT REPORT

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Certificate

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Submitted in partial fulfilment of the requirement for Diploma in Neuro Nursing from the Sree Chitra Tirunal Institute for Medical Sciences and Technology.

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CHAPTER I
INTRODUCTION

Background of the study

Anxiety is a state of emotion that serves to mobilize an organism to escape or to avoid danger. All people experience some degree of anxiety as they face new challenging or life threatening situations. Anxiety is not just a feeling of uneasiness but a serious problem that increases the risk of depression, substance abuse, and numerous physical health problems.

Disease and death are being increasingly ruled out from the pattern of everyday life. Therefore, disease and death represent an extreme emotional stress for todays human beings, who find it difficult to assess their significance. Anxiety provokes a physiological stress response which impedes the healing process. Thus the reduction of pre operative anxiety is widely accepted in part of nursing care.

Like any other surgical procedures, Embolisation is an Interventional Neuro Surgical procedure. Surgery is always a major experience in the life of the patient and family. Surgical procedures often raises fear about what will be found during operation and how this may or may not express it. Almost all of them have fear about surgery. If the pre procedure anxiety is severe at panic stage ,the patient can develop post procedure complications easily.

The most commonly used psychometric self report inventory is probably Speilberger's State Trait Anxiety Inventory (STAI-Speilberger et al ,1970). State and Trait Anxiety are analogous in certain respects to kinetic and potential energy. People who differ in trait anxiety will show corresponding differences in S-Anxiety depends

on the extent to which each of them perceives a specific situation as Psychologically dangerous or threatening, and this is greatly influenced by each individual's past experience.

Anxiety is one of the major problem in Psychology and result in considerable functional impairment. State and Trait Anxiety is one of the most common features of anxiety. State anxiety refers to emotional reactions characterized by subjective, conscious feelings of tension, apprehension, nervousness and worry. In contrast, Trait anxiety deals with individual differences in the dangerous, and in the frequency that state anxiety is experienced. Statistics vary widely but most agree that anxiety disorders are more common in women than in men. Medical illness and invasive procedures are often associated with anxiety.

Need and Significance of the study

The patients admitted for Embolisation are very anxious about the procedure and its outcome. They are in high emotional stress before surgery. They also fear about the risk factors. The purpose of this research was to gain an understanding how the pre procedure education process is beneficial in reducing the anxiety of the patients.

Anxiety and depression are factors known to negatively influence recovery after a surgical procedure. In a study conducted among elective PTCA patients about 16% of men and 24% of women had state anxiety scores comparable to those experienced by neuropsychiatric patients (Astin, 2005)

Pre Procedure anxiety increases the chances of post procedure pain, post procedure analgesic consumption, and also hospital stay and recovery. In this situation pre procedure teaching plays an important role in relieving post procedure anxiety and

to reduce anxiety related complications. Thus the reduction of Pre procedure and Anxiety is widely accepted as part of nursing care. Specialist nurses have the potential to play a greater role in identifying those at risk of developing anxiety and depression. However, this unmet need will remain unmet until specialist nurses who spend the most face - to face time with patients are equipped with the skills and resources to systematically identify those "at risk".

The patients may ask to many questions about the procedure, recurrence, follow up, recovery etc. and the investigator felt the need to conduct the study about the effectiveness of pre procedure teaching on anxiety.

Statement of the Problem

Effect of health Education on anxiety of patients undergoing Embolisation.

Definition of terms

Embolisation - In this study, Embolization is an interventional neurosurgical procedure to treat aneurysms and Arterio venous malformations of the Central Nervous System.It is also known as Embolotherapy or Endovascular therapy.

Anxiety - It is a state of emotion and is measured by using Speilberger's State Trait Anxiety Inventory (STAI) in Malayalam version

Health Education :- It is an interactive process which helps to give proper explanation to the patient about embolisation procedure, its need for the procedure, outcome, ICU stay and follow up using a pamphlet prepared by the investigator.

Objectives of the study

- To assess Pre and post procedural anxiety of patients undergoing Embolisation.
- To find out the effectiveness of health education on anxiety of patients undergoing Embolisation.

Methodology

Study design - One group pre test - post test design. Pre test on the day of admission. Post test done on the first post procedure day.

Sampling - Convenient sampling. In this study total sample was 20 patients.

Tool - The Investigator assess the anxiety level of patient by using standardized Speilberger's State Trait Anxiety Inventory. After assessing the anxiety level the investigator gives health education by using self prepared health education. The content of the health education includes the disease condition, procedures mainly the need for the procedure, its outcome, ICU stay and follow- up. This was approved by the experts in Radiology department SCT IMST.

Limitations : This study is limited to

1. The Patients who are speaking Malayalam.
2. The patients who are conscious, oriented and co-operative.

Summary

This chapter deals with introduction, background of the study, need and significance of the study, statement of the problem, definition of terms, objectives of the study, Methodology and limitations.

Organization of the reports

Chapter II deals with the summary of related studies reviewed. Chapter III deals with the Methodology of the study. Chapter IV contains analyses and interpretation of the findings. Chapter V consists of summary, conclusion, Implication and limitations of the study and recommendations. This report also includes a selected bibliography and appendix.

CHAPTER II
REVIEW OF LITERATURE

Review of Literature is an important aspect of any research project from beginning to end. It gives character insight into the problem and helps in selecting methodology, developing tool, and also analyzing data. With these in view, an intensive review of literature has been done.

The review of literature relevant to this study is arranged in the following sections.

(a) Studies on Embolisation.

(b) Studies for reducing anxiety by pre procedural education .

STUDIES ON EMBOLISATION

Pamuk (2005) retrospectively studied 38 patients treated for aneurysms with the Liquid polymer Onyx. The patients were given 500 ml of fluid after induction and bradycardia was prevented in order to keep patients hyperdynamic. ECG, NIBP, BP (invasive), pulseoxymetry, Core temperatures, $ETCO_2$ and urine output were monitored throughout the intervention. Heart rate & BP changes in response to balloon inflation, DMSO Injection, Onyx injection and balloon deflation were recorded. All patients showed a tendency to oxygen desaturation, but this finding did not cause any clinical consequence. The Authors did not find any evidence of toxicity or any anesthetic complications in those patients. The only clinical concern was a tendency to oxygen desaturation, which might be explained by the inhalational elimination of DMSO.

Hussain (2005) reported a case on five patients with acute SAH and arterial aneurysm of an unpaired ACA, who underwent coil embolisation. In all cases endovascular treatment using detachable platinum coils resulted in an atleast satisfactory degree of aneurysm obliteration without parent artery occlusion or embolic infract. All patients had clinical and angiographic follow up with median follow up time of 29 months during which no aneurysm regrowth was encountered. Inspite of a small patient group the results suggested that altered flow dynamic due to enlarged single intracranial vessels might predispose to aneurysm formation and that endovascular embolisation was an appropriate treatment option in distal aneurysms of an unpaired ACA.

Ledezma (2006) conducted a study in a single center, retrospective, non randomized study, 90.5% of patients had excellent or good outcomes after AVM Embolisation, with a complication rate lower than previously reported. Spetzler - Martin grade III to V and periprocedural hemorrhage were the most important predictive factors in determining outcome after embolisation.

The author reported a wide variability in over all complication rates caused by embolisation (10-50% Neurological deficit, 1-4% mortality) . They reviewed their experience with AVM embolisation and analyzed factors that might predict complications and clinical outcomes after AVM Embolization.

Nilson (2005) reported a study on the consequences of introducing coil embolization for the total management of and outcome in patients with SAH. The increasing use of coil embolization for ruptured aneurysm in the anterior circulation did not have any significant impact on the overall incidence of SAH related complications or outcome. The main determinant for outcome after SAH is still the severity of the SAH

Lanzino (2005) reported Endovascular techniques for the treatment of intracranial aneurysm. Modifications of more traditional coils have been introduced. Such modifications include newer coils coated with various polymers to increase both coil thrombogenicity and degree of aneurysm packing. In addition, newer coil designs aimed at improving the conformability of the coil the aneurysm have been used with promising preliminary results. The availability of a newergeneration of stents specifically designed for intracranial navigation allows for more effective treatments of aneurysm with wide necks which usually have been considered unsuitable for optimal endovascular treatment. Endovascular alternatives to coil embolisation, such as liquid embolic materials, also have been explored for the treatment of intra cranial aneurysms treatment with varying results. They summarize the rationale for use of these newer devices and early clinical experiences. Areas of current research and future directions of endovascular aneurysm treatment also were discussed.

Inone (2005) encountered a 48 year old man who presented with dense SAH immediately after being involved in a motor vehicle accident. Emergent angiography revealed traumatic aneurysm of the left cavernous ICA with extension beyond the superior wall of the cavernous sinus into the subarchoid space and concomitant direct high flow cartoid cavernous fistula. Detachable platinum coil occlusion of the cavernous ICA followed by superficial temporal artery, middle cerebral artery anastomosis on day and aggressive therapy to SAH, including ventriculocisternal irrigation and drainage were performed. The patient eventually made a good recovery.

Considering the extremely poor prognosis and unstable nature of a ruptured traumatic aneurysm with extensive SAH in the acute stage, definitive and immediate

prevention of rebleeding in conjunction with proper revascularization would be warranted, such as in the reported case.

Perrira (2005) reported two cases in which wide neck basilar aneurysms were treated with overlapping stent supported coil embolization. This overlapping techniques ensure complete stent interface with the aneurysm neck and likely improves long term outcomes. They demonstrated the feasibility of this novel technique and suggested its application for other bifurcation aneurysm requiring stent supported coil embolization.

STUDIES ON REDUCTION IN ANXIETY

Sanki (2001) conducted a study to assess the effect of walking into the operating room on pre operative anxiety. 80 non pre medicated patients scheduled in elective surgery were randomly divided into two groups based on how they were transported into operating room. One group was carried on a stretcher and other entered on foot under their own power. A subjective assessment of anxiety performed by using a state and trait anxiety inventory failed to show any significant increase in the level of anxiety in the operating room as compared to the day before surgery for any of the group. The researcher concluded that walking into the operation theatre has no significant influence on pre-operative anxiety level.

Greeve (1999) done a study related to the day surgery pre operative anxiety and reduction coping strategies. Hospitalization even in patients who are faced with prospect of surgery is known to cause anxiety. One may therefore expect some degree of anxiety in patients attending for day surgery. Anxiety provokes a physiological stress

response which impedes the healing process. Thus the reduction of pre operative anxiety is widely accepted as part of nursing care. This article investigated the coping strategies that patients adopt and the suitability of current anxiety reduce interruption. It argued that individual coping style does not remain static but adapt according to need. The therapeutic potential of the non patient relationship in anxiety reduction is being over shadowed by uncertainty reduction approach which place disproportionate emphasis on the provision of information.

Spalder (2004) conducted a study related to reducing anxiety by pre-operative education and make the future familiar Pre-procedure education widely used by occupational therapist all over the world help the patient for their impending surgery and post operative needs. The purpose of this research was to gain an understanding as to how the pre operative education process is beneficial in reducing anxiety of patients with awaiting surgery. The participants in this study were a convenient sample of health care professional who presented information on pre operative education during 9 month data collection period and the sample of patients who attended the programme. The data were collected from observing 5 pre operative education programmers; 26 written patient evaluations, 16 inerview with 7 patients of education and observation, 3 teams meetings, 20 interviews of 10 participants and documentation pertaining to the programme. From the result it seemed that patient education can reduce anxiety by making the unknown familiar. Such patients will encounter during and after surgery giving an opportunity to meet the staff who will be caring for them and familiarizing patient with environment they are going to meet in the hospital.

Otawara (2004) conducted a study to assess the anxiety before and after surgical repair of asymptomatic unruptured Intracranial aneurysm. Patients notified of the presence of the unreptured Intracranial aneurysm might become anxious because of the fear of rupture . They prospectively investigated the anxiety of patients with unruptured intracranial aneurysm before and after surgery.37 patients were enrolled . The anxiuety of patients was assessed one month before and after surgery using Japanese version of the State Trait Anxiety Inventory. The Trait anxiety scores , which refer to stable personality factors reflecting the general level of fearfulness, did not change signiuficantly after surgery . In contrast, the state anxiety scores of, which refer to transient anxiety that varies according to the situation, decreased significantly after surgery. Only the pre operative high state anxiety scores among the multiple variables were associated with the significant decrease in state anxiety after surgery. The researcher concluded that the anxiety of patients with asymptomatic unruptured intracranial aneurysm significantly decreased after surgery.

Jayachandran (2006) conducted a randomized experimental study on reduction in anxiety following group intervention and Yoga- Meditation for patients with epilepsy. The result showed that the actual changes after controlling the initial difference among experimental and control groups at 6 months showed significant reduction in scores for trait anxiety and total anxiety for psychoeducation and meditation groups. The analysis showed significant reduction in state anxiety score for psychoeducation group.

Summary

The review of literature on the above areas helped the Investigator to gain knowledge about the anxiety level of patients admitted for Embolisation and the effect of health education to better outcome.

The literature review also helps in the design of the study, development of tool, information about sample, data collection and plan of analysis.

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CHAPTER III

METHODOLOGY

This chapter deals with research approach, research design, settings, the sample and sampling technique, development of tool, description of tool, pilot study, data collection and plan of analysis.

Research approach

The approach is made quantitative by using Spielberger's State Trait anxiety Inventory. The aim of the study is

1. To assess Pre and post procedural anxiety of patients undergoing Embolization.
2. To find out the effectiveness of health education on anxiety of patients undergoing Embolization.

Research Design

For fulfiling the objectives of the study one group pre test-post test was used for collection and analysis of data.

Settings

The study was conducted in the Neuro Medical ICU and General Medical Ward at Sree Chitra Tirunal Institute for Medical Sciences and Tehcnology, Medical College, Trivandrum. The patient with AVM and aneurysm were admitted in admitted in General Medical Ward and from there patients were shifted to cath lab for the procedure.After embolisation, the patients were shifted to NMICU for observation and further care .

Department of Radiology has been an established center for imaging and interventions in neuro and vascular diseases and problems of other systems. Around

300 patients were treated by interventional Radiology procedures per year. Embolisation is done in other systems of our body and about 80 % of cases are cerebral and spinal embolisation.

The rationale for selecting this hospital is that the investigator is quite familiar with the hospital.

Population

The population of the study was those patients who are undergoing Embolisation procedure at SCT IMST, Trivandrum.

Sample and Sampling Technique

Consecutive sampling technique was used for selecting the sample . All the patients who met the inclusion criteria, during the study period were selected for the study.

Inclusion criteria

- Both male and female patients who had undergone Embolisation.
- Those patients who are co-operative, conscious, oriented.
- Those patients who know malayalam.

Exclusion criteria

- Those patients who are not willing for the procedure.
- Those patients who do not know Malayalam.

Development of tool

An extensive review and study of literature and journal articles helped in preparing a Health Education pamphlet and it was scrutinized and approved by experts in Sri Chitra Tirunal Institute for Medical Sciences and Technology.. In this study the investigator

used Standardised Speilberger's State Trait Anxiety Inventory for assessing pre procedure anxiety and to assess post procedure anxiety which contains 36 questions.

Description of tool

The tool used in the present study consists of the following parts.

Part - I

This part contains items such as name, age, sex, educational status, occupation etc. to obtain persoanl identification of the patient.

Part - II

It consisted of Speilberger's Structured Sate and Trait Anxiety Inventory which is a popular instrument for measuring anxiety. It has been used previously in many researches on emotional reactions to surgical procedures. It is written at a fourth grade reading level and can be completed in approximately 10-25 mts. This questionnaire consists of 36 items self reporting scale and has tow parts. The state scale and trait scale. The state anxiety scale assesses feeling of apprehension, tension, nervousness and worry in terms of how respondents feel "right now" for the 18 questions on this scale, possible responses are "not at all, some what, Moderately so, and very much so". The how people "feel generally" all the time. It includes statements such as "I am a steady person or I am nervous". Possible answers for the 18 items are almost, never, sometimes, often and almost always" The Investigator used this structured anxiety scale for assessing the anxiety of selected subjects before and after Embolisation.

Part III

After assessing the anxiety level health education was given to the patient and explained to them the items contained in it. The health Education contains details about

the disease condition, procedure, mainly the need for the procedure, ICU stay and follow up.

Pilot Study

Pilot study was conducted in August 2006. The aim of the study was to assess the effect of health education on anxiety of patients undergoing Embolisation. The study was conducted among 4 patients both male and female between the age group of 20-60 yrs. Consent was taken pre procedurely before asking questions. The tool used is State Trait Anxiety Inventory (Speilberger's) with 36 questions. The questions were asked in Malayalam. The total time period required was 30 minutes. Pilot study revealed that post test anxiety score was lower than pretest anxiety score.

Data Collection

For data collection formal permission was obtained from the authorities. Period of data collection was from August 2006 to October 2006 Also data was collected from NMICU and General Medical Ward.

The Investigator first introduced herself and explained the need and purpose of study to the patients. After getting consent from the patients, Anxiety level of patients was assessed with a help of Speilberger's State and Trait Anxiety Inventory. After this, health eudcation were given to the patient using the health education pamphlet. The patients were also given the opportunities to clear their doubts.

On the I post procedure day, the level of anxiety was assessed by using the same structured anxiety scale to find out the effectiveness of health teaching in reducing the anxiety level.

Plan of analysis

A plan of data analysis was developed by the Investigator after the pilot study. The data obtained from the study were subjected to statistical analysis.

Summary

This chapter deals with research approach used for the study design, setting of the study, samples and sampling technique, population, development of data collection tool, data collection procedure and plan for data analysis.

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CHAPTER IV
ANALYSIS AND INTERPRETATION OF DATA

This chapter presents the analysis and interpretation of the data collected from 20 patients who underwent embolisation at Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum.

Analysis is a process of organizing and synthesizing data in such a way that project questions can be answered. The overall analysis is to organize, structure and to elicit meaning from collected data.

Interpretation refers to the process of making sense of the results and the examining of the implications of the findings within a broader content.

The findings of the study were arranged and analysed under the following sections.

Section I : Distribution of data according to the demographic variables.

Section II : Distribution of data related to pre procedure and post procedure state and trait anxiety according to the Speil berger's State and Trait Anxiety score in males and females.

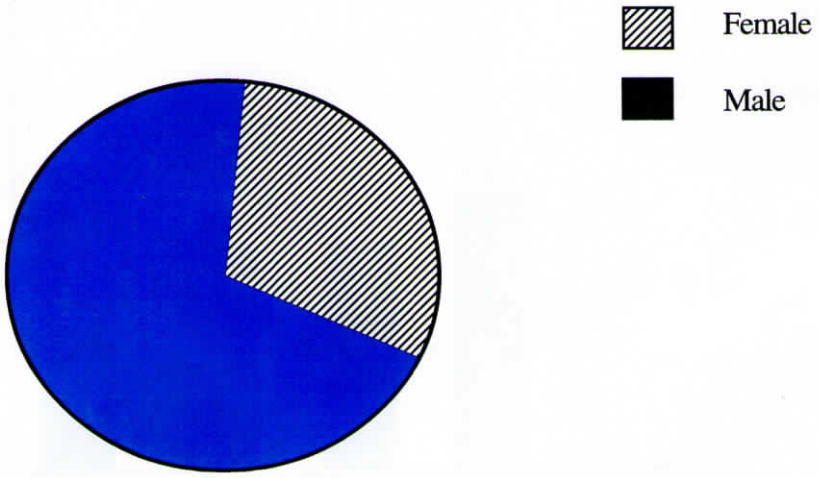
Section III : Distribution of data related to pre-procedure trait and post procedure trait anxiety according to the Speilberger's state and trait anxiety score in males and females.

Section I : Distribution of sample according to the demographic variables

Table I

(a) Distribution of samples according to sex

Sex	Frequency	Percentage
Male	13	65%
Female	7	35%

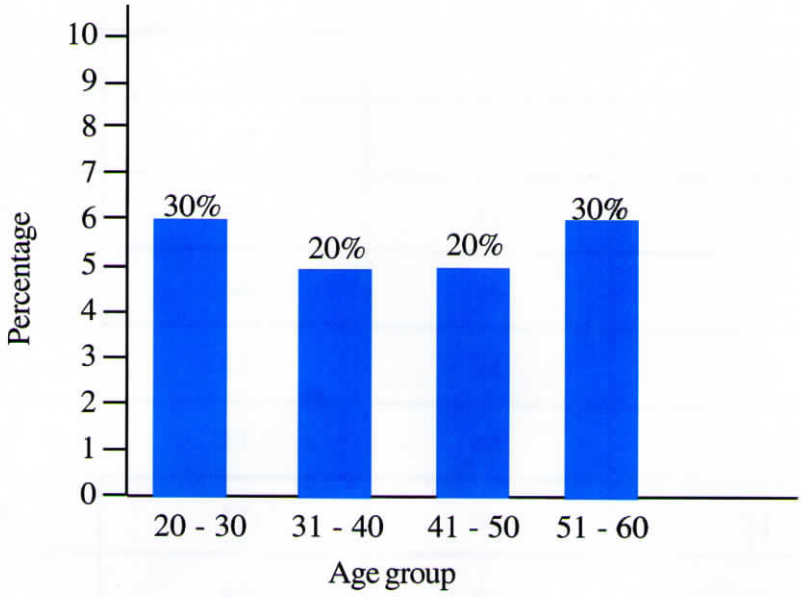


Data presented in table I reveal that 65% of the sampling population consisted of male patients and females were only 35%.

Table II

(b) Distribution of samples according to the age group

Age group	Frequency	Percentage
20 - 30	6	30
31 - 40	4	20
41 - 50	4	20
51 - 60	6	30



Data presented in table (2) depict the age group wise distribution of the patients. The maximum number of patients (30%) belonged to the 20-30 & 51-60 age group and minimum number (20%) each to the 31-40 & 41-50 group, respectively.

Table III

Distribution of State & Trait Anxiety scores of Males at pre & post procedure stages.

Age	State Anxiety score		Trait Anxiety score	
	Pre procedure	Post Procedure	Pre procedure	Post procedure
29	25	28	38	32
29	36	31	41	41
29	55	44	56	31
32	41	24	33	32
36	36	32	46	28
38	49	29	30	30
41	42	41	39	38
45	39	23	34	26
50	44	34	33	28
50	41	34	38	30
51	47	42	43	39
55	37	34	31	30
59	47	29	46	32
Total	539	425	542	417
Average	42	33	42	32

Table IV

Distribution of State & Trait Anxiety scores of Females at pre & post procedure stages.

Age	State Anxiety score		Trait Anxiety score	
	Pre procedure	**Post Procedure**	**Pre procedure**	**Post procedure**
20	37	31	41	40
26	38	32	35	28
29	57	49	31	30
32	48	36	41	46
49	47	47	50	43
49	47	30	40	22
55	42	37	39	41
Total	316	262	277	250
Average	45	37	40	36

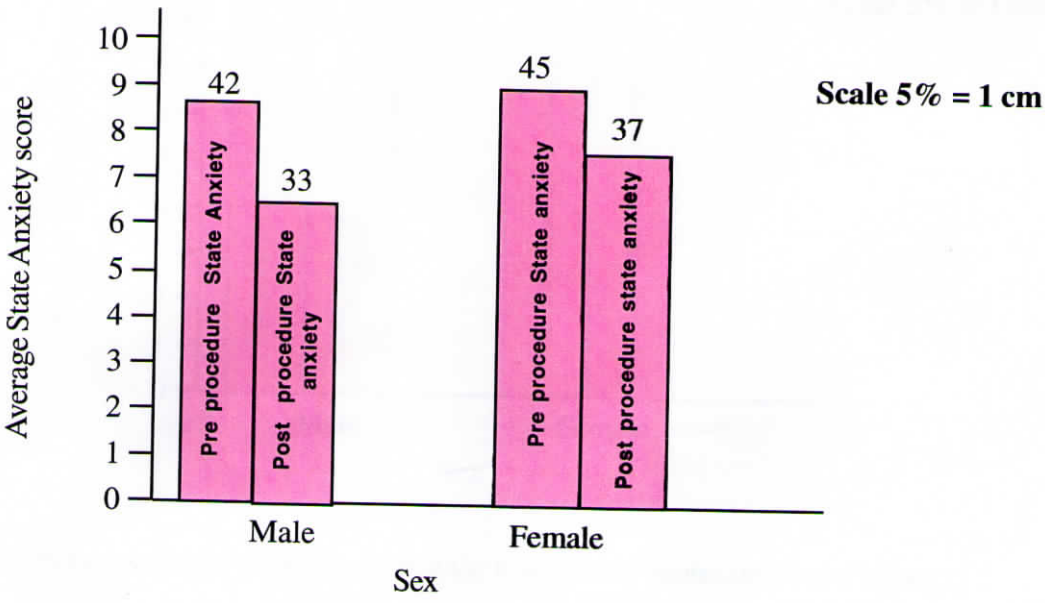
Section II

Distribution of data related to pre and post procedure state anxiety according to the Speilberger's state and trait anxiety score in Males and Females

Table V

(b) Distribution of sample according to average anxiety scores

Sex No = 20	Average score of Preprocedure State Anxiety	Average score of post procedure State Anxiety
Male No. 13	42	33
Female No. 7	45	37



Data presented on the table 5 indicate that state Anxiety of patients undergoing Embolisation decreased after the procedure by proper health education.

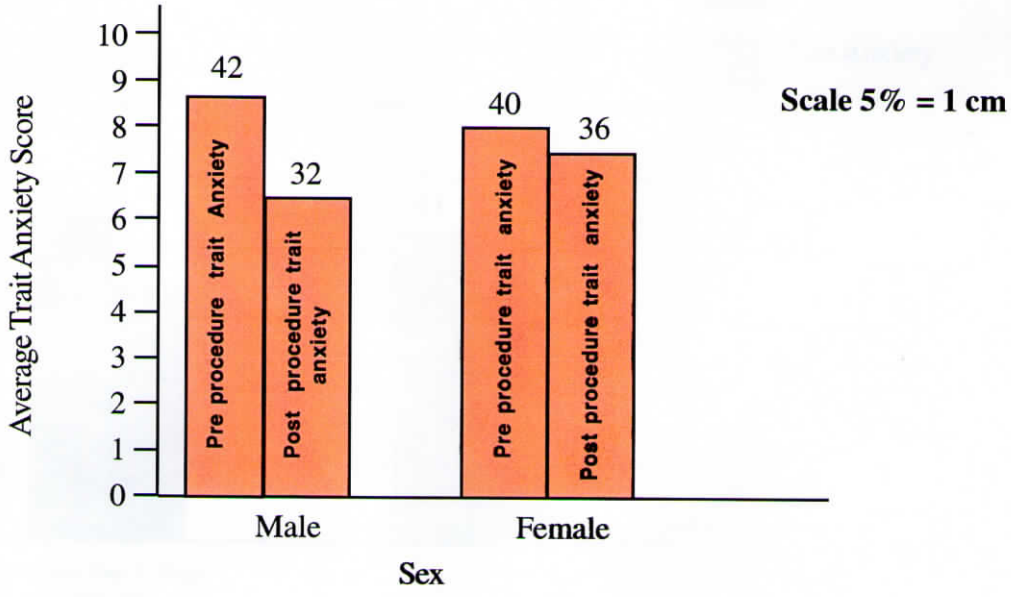
The statistical significance was not tested due to the small sample size.

Section III

Distribution of data related to pre and post procedure trait and post procedure trait anxiety according to the Speilberger's State and Trait Anxiety score in Males and Females

Table VI

Sex No= 20	Average score of Preprocedure trait Anxiety	Average score of post procedure trait Anxiety
Male No. 13	42	32
Female No. 7	40	36



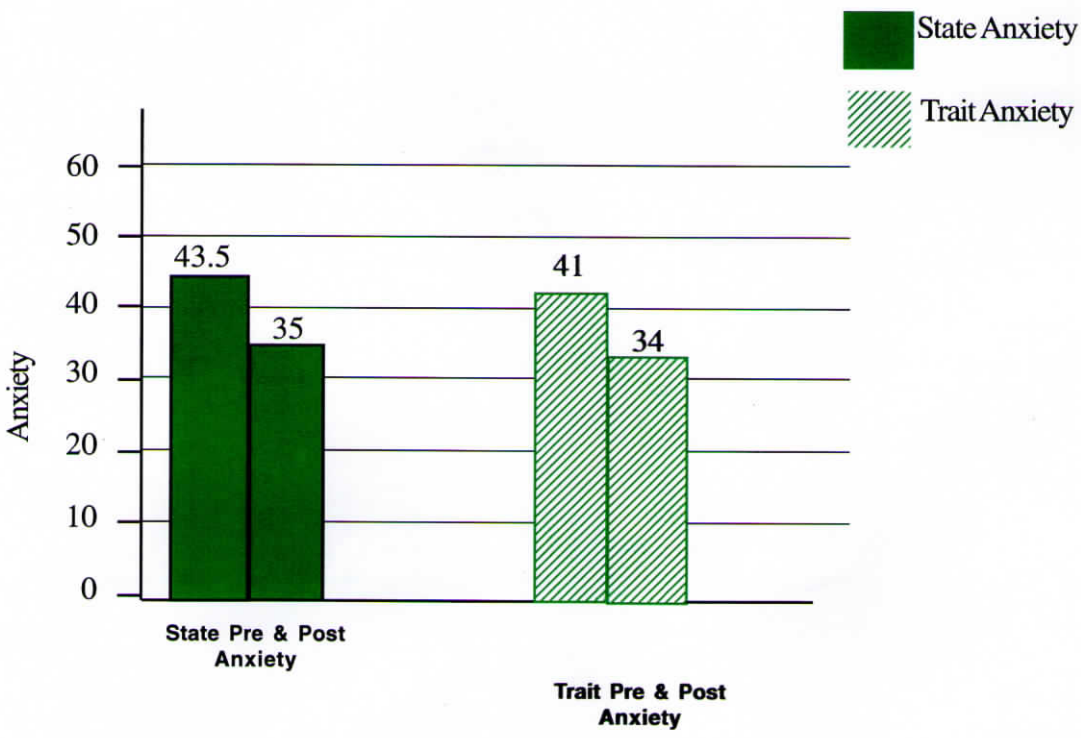
Data presented in the table 6 show that the trait anxiety scores decreased after Embolisation procedure in both males and females.

The statistical significance was not tested due to the small sample size.

Table VII

Average state and Trait Anxiety scores of Males and Females at Pre and Post procedure stages.

Type of anxiety	Average State and Trait Anxeity scores of Males and Females		
	Males	Females	Average
State Anxiety (Pre procedure)	42	45	43.5
State Anxiety (Post procedure)	33	37	35
Trait Anxiety (pre procedure)	42	40	41
Trait Anxiety (Post procedure)	32	36	34



Data presented in the table (VII) show that the Trait Anxiety Scores decreased after Embolisation procedure. The statistical significance was not tested due to small sample size.

Summary

This chapter deals with analysis and interpretation of data collected from 20 patients. Descriptive statistics were used for the analysis. Bar and Pie diagrams were used to illustrate the findings of the study.

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CHAPTER - V

SUMMARY, CONCLUSION, LIMITATION AND RECOMMENDATION

This chapter gives a brief account of the present study including conclusions drawn from the findings and possible application of the results. Recommendations for future research and suggestions for improving the present study are also presented.

Summary

This study was conducted with the objective to assess pre procedure anxiety before health education and to assess post procedure anxiety of patients undergoing embolisation at Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum.

The Specific Objectives of the study.

- To assess Pre and Post procedure anxiety of patients undergoing Embolisation.
- To find out the effectiveness of health education on anxiety of patients undergoing Embolisation.

Need of the study was the careful attention of the anxiety level of patients undergoing Embolisation. Health education is one method of decreasing the anxiety level of patients.

A review of related literature helped the investigator to get a clear concept about the project topic undertaken, as well as to develop tools, methodology of the study and to decide the plan for data analysis.

A standardised Speilberg's State and Trait Anxiety Inventory was used for assessing the anxiety level of the patients. After assessing the anxiety level of the patients with a structured Questionnaire, health education given and pilot testing was also done, prior to the main Investigation.

The study was conducted in Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum Kerala during the period August- October 2006. The sample comprised of 20 patients both male and female between the age group of 20-60 years. Tools used for data collection included patients demographic data, Speil berger's State Trait Anxeity Inventory score which consisting of state anxiety score and trait anxiety score. State anxiety scale consisted of 18 questions and trait anxiety scale consisted of 18 questions.

The data obtained were analysed by using descriptive statistics. Both Bar and Pie Diagrams were utilized to illustrute the findings of the study.

The Major findings of the study.

- The pre procedure state anxiety of the patients is redued in both males and females after the procedure.

- The trait anxiety score decreased in both males and females after Embolisation procedure.

Limitations

(1) Study was limited to the SCTIMST, Tvpm.

(2) The study was conducted in a single group of patients admitted for Embolisation.

(3) The study was conducted only among Malayalee patients.

Conclusions

Based on the findings of the study, the following conclusions were drawn.

- ❖ With this limited number of patients it is not possible to generalize findings.
- ❖ There is need for studies involving more number of patients that validate the findings.

Recommendations

The following recommendations are made on the basis of the present study.

(1) Similar study would be repeated by increasing the sample size.

(2) An evaluation study to assess the effectiveness of preprocedure teaching on anxiety level of patients before and after surgery can also be done.

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സമ്മതപത്രം

രോഗിയുടെ അസുഖവുമായി ബന്ധപ്പെടുത്തിയും, ഓപ്പറേഷന് മുൻപും പിൻപുമുള്ള മാനസിക അവസ്ഥ പരിശോധിക്കുന്നതിനായും അതിലെ പോരായ്മകൾ എന്നെ പറഞ്ഞു മനസ്സിലാക്കി തരുന്നതിനും ഞാൻ പൂർണ്ണമായും സമ്മതിക്കുന്നു. ഇത് ഒരു പഠിത്തത്തിന്റെ ഭാഗമായാണ്. ഈ പഠനത്തിന് വേണ്ടി ഞാൻ സഹകരിച്ചുകൊള്ളാമെന്ന് സമ്മതിക്കുന്നു.

എന്ന്

രോഗിയുടെ ഒപ്പ്

തീയതി

THE STATE TRAIT ANXIETY INVENTORY (ADOPTION AND TRANSLATION OF SPEILBERGER'S STATE TRAIT ANXIETY INVENTORY)

നിർദ്ദേശങ്ങൾ

താഴെകൊടുത്തിരിക്കുന്ന കാര്യങ്ങൾ ഇപ്പോൾ നിങ്ങൾക്ക് എത്രമാത്രം അനുഭവപ്പെടുന്നുണ്ടെന്ന് ഓരോ ചോദ്യത്തിനും ഉചിതമായ ഉത്തരത്തിനു നേരേ Xഅടയാളത്തിലൂടെ രേഖപ്പെടുത്തുക. മനോഭാവങ്ങളിലും താല്പര്യങ്ങളിലും ഓരോ വ്യക്തിയും വ്യത്യസ്ഥനായിരിക്കുന്നു എന്നതിനാൽ ശരിയോ തെറ്റോ ആയ ഉത്തരങ്ങളില്ല. ഓരോ ചോദ്യത്തിനും നാല് സാദ്ധ്യതകൾ ഉത്തരങ്ങളായി കൊടുത്തിട്ടുണ്ട്. അവയിൽ നിങ്ങൾക്ക് യോജിക്കുന്നത് ഏതാണെന്ന് X അടയാളപ്പെടുത്തി സൂചിപ്പിക്കുക.

ഇത് സമയപരിധിയില്ലാത്ത ഒരു ടെസ്റ്റ് ആണെങ്കിലും കഴിയുന്നതും വേഗത്തിൽ ചെയ്തുതീർക്കുവാൻ ശ്രമിക്കണം. ചോദ്യങ്ങളെക്കുറിച്ച് ചിന്തിച്ച് കൂടുതൽ സമയം കളയാതെ ഓരോ ചോദ്യവും വായിക്കുമ്പോൾ തോന്നുന്ന ആദ്യത്തെ പ്രതികരണം രേഖപ്പെടുത്തുക. എല്ലാ ചോദ്യങ്ങൾക്കും ഉത്തരം എഴുതുവാൻ പ്രത്യേകം ശ്രദ്ധിക്കുക. നിങ്ങളുടെ ഉത്തരങ്ങൾ പരമരഹസ്യമായി സൂക്ഷിക്കുന്നതാണ്.

ഈ ചോദ്യാവലിയിൽ നിങ്ങളുടെ പേര് നൽകണമെന്നില്ല. എന്നാൽ ഗവേഷണത്തിന് താഴെ പറയുന്ന വിവരങ്ങൾ നൽകുക.

വയസ്സ്.....

സ്ത്രീ/പുരുഷൻ.....

വിദ്യാഭ്യാസ യോഗ്യത.....

കുടുംബാംഗങ്ങളുടെ എണ്ണം.....

വിവാഹിത(ൻ)/അവിവാഹിത(ൻ).....

പ്രതിമാസ കുടുംബവരുമാനം.....

നമ്പർ	പ്രസ്താവന	ഒരിക്കലുമില്ല	വല്ലപ്പോഴും	മിക്കവാറും	എല്ലായ്പ്പോഴും
1.	എനിക്ക് ശാന്തത അനുഭവപ്പെടുന്നുണ്ട്	1	2	3	4
2.	എനിക്ക് സുരക്ഷിതത്വം തോന്നുന്നുണ്ട്	1	2	3	4
3.	എനിക്ക് മനോസമ്മർദ്ദം ഉണ്ടാകാറുണ്ട്	1	2	3	4
4.	എനിക്ക് ആശ്വാസം തോന്നുന്നുണ്ട്	1	2	3	4
5.	എനിക്ക് അസ്വസ്ഥത അനുഭവപ്പെടുന്നുണ്ട്	1	2	3	4
6.	വന്നുചേരാവുന്ന നിർഭാഗ്യങ്ങളെക്കുറിച്ചുള്ള ആകുലചിന്ത എനിക്കിപ്പോൾ തോന്നുന്നുണ്ട്	1	2	3	4
7.	എനിക്ക് വിശ്രമം ലഭിച്ചതായി അനുഭവപ്പെടുന്നുണ്ട്.	1	2	3	4
8.	എനിക്ക് ഉത്കണ്ഠ അനുഭവപ്പെടുന്നുണ്ട്	1	2	3	4
9.	എനിക്ക് സുഖം തോന്നുന്നുണ്ട്	1	2	3	4
10.	എനിക്ക് ആത്മവിശ്വാസം അനുഭവപ്പെടുന്നുണ്ട്	1	2	3	4
11.	എനിക്ക് അധൈര്യം തോന്നുന്നുണ്ട്	1	2	3	4
12.	എനിക്ക് പിരിമുറുക്കം അനുഭവപ്പെടുന്നുണ്ട്	1	2	3	4
13.	എനിക്ക് വിശ്രമം അനുഭവപ്പെടുന്നുണ്ട്	1	2	3	4
14.	എനിക്ക് സംതൃപ്തി തോന്നുന്നുണ്ട്	1	2	3	4
15.	എനിക്ക് നിരാശ തോന്നുന്നുണ്ട്	1	2	3	4
16.	ഞാൻ പെട്ടെന്ന് വികാരക്ഷോഭത്തിന് അടിമപ്പെടുന്നുണ്ട്	1	2	3	4
17.	എനിക്ക് ആനന്ദം തോന്നുന്നുണ്ട്	1	2	3	4
18.	എനിക്ക് പ്രസന്നത തോന്നുന്നുണ്ട്	1	2	3	4

നിർദ്ദേശങ്ങൾ

ദൈനംദിന ജീവിതത്തിൽ അനുഭവപ്പെടാറുള്ള ചില കാര്യങ്ങൾ താഴെക്കൊടുത്തിരിക്കുന്നു. അസാധാരണയായി നിങ്ങൾക്ക് എത്രത്തോളം അനുഭവപ്പെടുന്നുവെന്നത് ഉചിതമായതിനുനേരെ Xഅടയാളത്തിലൂടെ രേഖപ്പെടുത്തുക.

നമ്പർ	പ്രസ്താവന	ഒരിക്കലുമില്ല	വല്ലപ്പോഴും	മിക്കവാറും	എല്ലായ്പ്പോഴും
19.	എനിക്ക് മനസുഖം തോന്നാറുണ്ട്	1	2	3	4
20.	എനിക്ക് പെട്ടെന്ന് ക്ഷീണം തോന്നാറുണ്ട്.	1	2	3	4
21.	എനിക്ക് കരണയണമെന്ന് തോന്നാറുണ്ട്	1	2	3	4
22.	മറ്റുള്ളവരെപ്പോലെ സന്തോഷിച്ചിരിക്കാനുള്ള ആഗ്രഹം എനിക്കുണ്ട്	1	2	3	4
23.	പെട്ടെന്ന് തീരുമാനങ്ങൾ എടുക്കുവാൻ സാധിക്കാത്തതുമൂലം പല നഷ്ടങ്ങളും എനിക്കുണ്ടാകാറുണ്ട്.	1	2	3	4
24.	എനിക്ക് വിശ്രമം അനുഭവപ്പെടാറുണ്ട്	1	2	3	4
25.	എനിക്ക് സ്വസ്ഥതയും ശാന്തതയും അനുഭവപ്പെടാറുണ്ട്	1	2	3	4
26.	എനിക്ക് വിഷമതകൾ വർദ്ധിക്കുകയും അവയെ തരണം ചെയ്യുവാൻ കഴിയാതെയും വരാറുണ്ട്	1	2	3	4
27.	നിസ്സാരകാര്യങ്ങളെക്കുറിച്ച് ഞാൻ ചിന്താകുലനാകാറുണ്ട്	1	2	3	4
28.	എനിക്ക് സന്തോഷമുണ്ട്	1	2	3	4
29.	സാധാരണ കാര്യങ്ങൾ കഠിനമായിട്ടെടുക്കുന്ന പ്രവണത എനിക്കുണ്ട്	1	2	3	4
30.	എനിക്ക് സുരക്ഷിതത്വം തോന്നാറുണ്ട്	1	2	3	4
31.	എനിക്ക് നിരാശ ഉണ്ടാകാറുണ്ട്	1	2	3	4
32.	എനിക്ക് സംതൃപ്തി തോന്നാറുണ്ട്	1	2	3	4
33.	അപ്രധാനമായ ചില ചിന്തകൾ എന്നെ വിഷമിപ്പിക്കാറുണ്ട്	1	2	3	4
34.	ജീവിതനൈരാശ്യങ്ങൾ ഗൗരവപൂർവ്വ-മെടുക്കുകയും മനസ്സിൽ നിന്ന് അവയെ മാറ്റുവാൻ കഴിയാറില്ല	1	2	3	4
35.	സ്ഥിരചിത്തയുള്ള വ്യക്തിയാണു ഞാൻ	1	2	3	4
36.	അടുത്തുകാലത്തു എന്റെ സംരഭങ്ങളെ കുറിച്ചും താല്പര്യങ്ങളെക്കുറിച്ചും ആലോചിക്കുമ്പോൾ എനിക്കു മനോ സമ്മർദ്ദമുണ്ടാകുന്നു.	1	2	3	4

N.B: എല്ലാ ചോദ്യത്തിനും ഉത്തരം എഴുതിയിട്ടുണ്ടോ എന്ന് ഒരിക്കൽക്കൂടി പരിശോധിക്കുക.

Speilberger's State - Trait Anxiety Invetory

Score of State Anxiety

Sl.No.	ഒരിക്കലുമില്ല	വല്ലപ്പോഴും	മിക്കവാറും	എല്ലായ്പോഴും
1.	4	3	2	1
2.	4	3	2	1
3.	1	2	3	4
4.	4	3	2	1
5.	1	2	3	4
6.	1	2	3	4
7.	4	3	2	1
8.	1	2	3	4
9.	4	3	2	1
10.	4	3	2	1
11.	1	2	3	4
12.	1	2	3	4
13.	4	3	2	1
14.	4	3	2	1
15.	1	2	3	4
16.	1	2	3	4
17.	4	3	2	1
18.	4	3	2	1

Score of Trait Anxiety

Sl.No.	ഒരിക്കലുമില്ല	വല്ലപ്പോഴും	മിക്കവാറും	എല്ലായ്പോഴും
19.	4	3	2	1
20.	1	2	3	4
21.	1	2	3	4
22.	1	2	3	4
23.	1	2	3	4
24.	4	3	2	1
25.	4	3	2	1
26.	1	2	3	4
27.	1	2	3	4
28.	4	3	2	1
29.	1	2	3	4
30.	4	3	2	1
31.	1	2	3	4
32.	4	3	2	1
33.	1	2	3	4
34.	1	2	3	4
35.	4	3	2	1
36.	1	2	3	4

HEALTH EDUCATION FOR PATIENTS UNDERGOING EMBOLISATION

The Angiographic test is usually done to detect the disease involving the blood vessels of the brain. Since blood vessels are not visible in ordinary X- rays it is necessary to do this test to examine the diseased blood vessels and identify the exact cause and location of the disease.

You have abnormal Dilatation/connections in your blood vessels (Arteries and Veins) in the brain, which have enlarged in size. You are required to undergo a special X-ray examination Arteriogram/DSA Digital subtraction Angiogram to know the size, shape and extent of these blood vessels. Since it is difficult to operate there is an alternate way of treating these unnecessary blood vessels to great extent by permanently blocking these blood vessels.

The procedure is done under sterile aseptic technique as in the operation room. The people who were working there , wear a shield to protect them from radiation. This procedure is performed under local anesthesia or under general anesthesia. Incase the procedure is done under local an anesthesia. After cleaning the area with spirit, a long tube is inserted in to the blood vessels in your groin and negotiated close to the area of the abnormal blood vessel, while watching its progress o the Television screen. After confirming the position of the tube in its proper place, a medicine is injected through the tube which will instantly block the blood vessels. Occasionally a small balloon attached to the tip of the tube is intentionally detached in the blood vessel to occlude it and stop the undesirable high blood flow. You may also watch the progress of

the tube and balloon in your brain without any pain. If pain occurs, pain killer will give as per doctors orders. The procedure may take 3-4 hours during which you are required to lie flat and still. If this treatment is complete, sometimes operation may not be required. On the other hand you may have to be operated later if complete blocking was not possible. After the procedure, a sheath / tube is placed over the groin with dressing. So it is necessary to keep the leg Immobilized for 6 hours. You won't be given food or fluids for 6 hours after the procedure but IV fluids will be given through an IV cannula.

Although this procedure is performed by expert doctors, it must be understood very clearly that it carries a small but definite risk of complication. The risk factors vary from 0.1 - 5% depending upon the age of the patient, the status of his disease and other associated diseases like diabetes, hypertension, kidney disorders etc. The complications can be minor or major. In the majority of patients the test is done without any complications. Moreover, in this hospital the test is carried out by or under the supervision of doctors who are experts of many years standing. Since the test is considered necessary by your treating doctor, further treatment will be possible only after obtaining the results of this test.

After the procedure, you will be shifted to the Intensive care unit. If necessary, Oxygen is provided through mask for sometime. An ECG leads will be connected to record the heart's function . A urinary catheter is placed for 1 or 2 days. If you are stable, you can have normal diet. Within 3-4 days you will be discharged and after that as per order by the doctor medicines should be taken correctly & you should come for followup.

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എംബോളൈസേഷന് വിധേയനാകുന്ന രോഗികൾ അറിഞ്ഞിരിക്കേണ്ട കാര്യങ്ങൾ

സെറിബ്രൽ ആൻജിയോ ഗ്രാഫി എന്ന പരിശോധനയാണ് തലച്ചോറിലെ രക്തക്കുഴലുകൾ സംബന്ധമായ രോഗം കണ്ടുപിടിക്കുന്നതിനായി ഉപയോഗിക്കുന്നത്. സാധാരണ എക്സ്റേ പരിശോധനയിലൂടെ ഈ രക്തക്കുഴലുകൾ പരിശോധിക്കുന്നതിനും രോഗകാരണവും അവയുടെ യഥാർത്ഥ സ്ഥിതിയും മനസ്സിലാക്കുന്നതിനുമാണ് ഈ പ്രത്യേകപരിശോധന ആവശ്യമായി വരുന്നത്.

ഒരു പറ്റം അസാധാരണ രക്തക്കുഴലുകളാണ് നിങ്ങളുടെ അസുഖത്തിന് കാരണം. നിങ്ങൾ സെറിബ്രൽ ആൻജിയോ ഗ്രാഫി എന്ന വിദഗ്ദ്ധ എക്സ്റേ പരിശോധനയ്ക്ക് വിധേയനായെങ്കിൽ മാത്രമേ ഈ അസാധാരണമായ രക്തക്കുഴലുകളുടെ വലിപ്പവും സ്വഭാവവും വ്യാപ്തിയും മനസ്സിലാക്കാൻ സാധിക്കുകയുള്ളു. ഈ അസുഖം ഓപ്പറേഷൻ ചെയ്യുന്നതിന് വിഷമമായതിനാൽ മറ്റൊരു രീതിയിൽ അനാവശ്യമായ ഈ രക്തകുഴലുകളെ അടയ്ക്കാൻ സാധിക്കും. ഓപ്പറേഷൻ തീയറ്റർ പോലെ എല്ലാ സജ്ജീകരണങ്ങളും ഉള്ള മുറിയിൽ വച്ചാണ് ചെയ്യുന്നത്. റേഡിയേഷൻ കിട്ടാതിരിക്കുവാൻ വേണ്ടി അവിടെ ജോലി ചെയ്യുന്നവർ പ്രത്യേകം വസ്ത്രം ധരിച്ചാണ് നിൽക്കുന്നത്. ഈ ചികിത്സ നിങ്ങളെ പൂർണ്ണമായും ബോധം കെടുത്താതെയാണ് ചെയ്യുന്നതെങ്കിലും തണുപ്പ് തോന്നുന്ന ഒരു മരുന്ന്വച്ച് തുടവൃത്തിയാക്കി, അവിടം മാത്രം മരവിപ്പിച്ചതിന് ശേഷമാണ് ട്യൂബ് കടത്തുന്നത്. അതിലേക്കായി തുടയിലെ രക്തക്കുഴലിലൂടെ നീളം കൂടിയ ഒരു ട്യൂബ് ശരീരത്തിലേക്ക് കടത്തി, ടെലിവിഷനിലൂടെ അതിന്റെ ഗതി വീക്ഷിച്ചുകൊണ്ട് തലച്ചോറിലുള്ള ഈ അനാവശ്യമായ രക്തക്കുഴലുകളുടെ സമീപം എത്തിക്കുന്നു. പ്രസ്തുത ട്യൂബ് ശരിയായ സ്ഥാനത്താണ് എന്ന് ഉറപ്പു വരുത്തിയതിനു ശേഷം ഈ അസാധാരണ രക്തക്കുഴലുകൾ പെട്ടെന്ന് അടയ്ക്കുന്ന ഒരു മരുന്ന് കുത്തി വയ്ക്കുന്നു. ചിലപ്പോൾ ട്യൂബിന്റെ അഗ്രത്തിൽ ഘടിപ്പിച്ചിട്ടുള്ള ബലൂണിനെ രക്തക്കുഴലിൽ നിക്ഷേപിച്ച് രക്തക്കുഴലുകൾ അടയ്ക്കുകയും പിണഞ്ഞു കിടക്കുന്ന രക്തക്കുഴലിലേയ്ക്കുള്ള രക്ത പ്രവാഹത്തെ നിർത്തുകയും ചെയ്യുന്നു.

നിങ്ങൾക്ക് തലച്ചോറിനുള്ളിലുള്ള ട്യൂബിന്റെയും ബലൂണിന്റെയും ഗതിവിഗതികൾ ടെലിവിഷൻ സ്ക്രീനിലൂടെ കാണാവുന്നതാണ്. പക്ഷേ നിങ്ങൾക്ക് ഈ സമയത്ത് യാതൊരു വേദനയും അനുഭവപ്പെടുകയില്ല. വേദന ഉണ്ടാവുകയാണെങ്കിൽ അത് അറിയാതിരിക്കുവാനായി വേദന സംഹാരി നൽകും. 3-4 മണിക്കൂർ നീണ്ടു നിൽക്കുന്ന ഈ ചികിത്സയ്ക്ക് നിങ്ങളുടെ സഹകരണം വളരെ ആവശ്യമാണ്. ഈ ചികിത്സ പൂർണ്ണമായും വിജയിച്ചാൽ ഓപ്പറേഷൻ ഒഴിവാക്കാൻ സാധിക്കും. പക്ഷേ രക്തക്കുഴലുകൾ പൂർണ്ണമായും അടയ്ക്കാൻ സാധിച്ചില്ലെങ്കിൽ നിങ്ങൾക്ക് പിന്നീട് ഓപ്പറേഷൻ വേണ്ടിവന്നേക്കും. ചികിത്സയ്ക്ക് ശേഷം ഒരു ട്യൂബ്, കാലിൽ ഡ്രസ്സിങ്ങോടെ ഉണ്ടായിരിക്കും. അതിനാൽ 6 മണിക്കൂർ സമയത്തേയ്ക്ക് കാല് അനക്കാൻ പാടില്ല. 6 മണിക്കൂർ സമയത്തേയ്ക്ക് ഭക്ഷണവും നൽകുന്നതല്ല. ക്ഷീണം ഉണ്ടാകാതിരിക്കാൻ വേണ്ടി കൈയ്യിൽ സൂചി വയ്ക്കുകയും അതുവഴി ഗ്ലൂക്കോസ് നൽകുന്നതുമായിരിക്കും.

ഈ പരിശോധന നടത്തുന്നത് വിദഗ്ധരായ ഡോക്ടർമാർ ആണെങ്കിലും, അതിനോട് അനുബന്ധിച്ച് കുറഞ്ഞ തോതിലെങ്കിലും വ്യക്തമായ അപകടസാധ്യതകൾ ഉണ്ട് എന്ന് നാം മനസ്സിലാക്കിയിരിക്കേണ്ടതാണ്. രോഗിയുടെ പ്രായം, രോഗത്തിന്റെ അവസ്ഥ, പ്രമേഹം, രക്തസമ്മർദ്ദം, വൃക്കരോഗങ്ങൾ എന്നിവ ഉണ്ടോ ഇല്ലയോ എന്നതിനെ അടിസ്ഥാനമാക്കി അപകടസാധ്യത 0.1% മുതൽ 5% വരെ ഏറിയും കുറഞ്ഞും ഇരിക്കും.

ചികിത്സയ്ക്ക് ശേഷം കൂടുതൽ പരിചരണത്തിനായി തീവ്രപരിചരണവിഭാഗത്തിലേക്ക് മാറ്റും. താങ്കൾ പൂർണ്ണ വിശ്രമത്തിലായിരിക്കുന്നതിനാൽ മൂത്രം പോകുന്നതിനായി ഒരു ട്യൂബ് ഇട്ടിരിക്കും. ഹൃദയത്തിന്റെ പ്രവർത്തനം മനസ്സിലാക്കുന്നതിന് തുടർച്ചയായി ഇ.സി.ജി മോണിറ്റർ വയ്ക്കും. ഒരു മാസ്ക് വച്ച് ഓക്സിജൻ ആവശ്യം വരികയാണെങ്കിൽ കുറച്ച് സമയത്തേക്ക് തരും. മറ്റ് കുഴപ്പങ്ങളൊന്നുമില്ലെങ്കിൽ അടുത്ത ദിവസം തന്നെ സാധാരണ ആഹാരം കഴിക്കാവുന്നതാണ്. സാധാരണഗതിയിൽ 3-4 ദിവസത്തിനുള്ളിൽ വീട്ടിലേക്ക് പോകാവുന്നതാണ്. തുടർന്ന് ഡോക്ടറുടെ നിർദ്ദേശപ്രകാരം മരുന്ന് കഴിക്കുകയും പറയുന്ന സമയത്ത് പുന:പരിശോധനയ്ക്ക് വരേണ്ടതുമാണ്.

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ABBREVIATIONS

ECG – Electrocardiogram

NIBP – Non invasive blood pressure

BP – Blood Pressure

DMSO - Dimethyl sulfoxide

ACA - Anterior Cerebral Artery

ICA - Internal Carotid Artery

SAH - Sub Arachnoid Haemorrhage

AVM - Arterio venous Malformation

ICU - Intensive Care Unit

STAI - State Trait Anxiety Inventory.

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