



ORIGINAL RESEARCH PAPER

Psychiatry

CT SCAN A SURVEY OF MYTHS

KEY WORDS: anxiety; medical condition, co morbidity

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ABSTRACT

Aims and Objective—The current study assessed prevalence of different myths and fears among patients undergoing neuroimaging CT Scan for various reasons.

Method—134 patients surveyed who reported to department of neuroimaging for CT scan for any non traumatic reasons.

Results—A total of 132 (95 male and 37 female) patients were completed the study, the mean age of the sample was 38.34 ±10.83 years. On survey 34.1 % people reported fear on entering CT scan machine. However 81.8 % of people were not aware of radiation hazard, 75 % were not aware about use of contrast, 51.5 % feels procedure as costly, 14.4% concerned about illness exacerbation, 10.6% worried about brain dysfunction, 15.9% considered cancer as a risk, 18.9% infertility, 14.4% sexual dysfunction, 23.5% Skin rashes and 12.9% considered hair loss as possible risk associated with CT scan.

Conclusions—Severity of anxiety symptoms was strongly associated with having medical co morbid conditions.

Introduction

Use of neuro imaging in clinical practice is increasing day by day, and there is a high expectation is found to be associated with these investigations as if these investigations will clear all diagnostic dilemma and lead to full recovery. Along with high expectations, there are certain fears, worries, emotional as well as cognitive impacts associated with participation of these diagnostic tests [1]. Apprehensions and anxiety are known to be associated with diagnostic neuroimaging, and it is reported up to 91 % of the persons [2]. There may be various reasons like misconception and wrong information that forms the myths, that needs to be corrected. Patient anxiety and myths can be reduced through awareness programs and by improving the communication between the patient and the imaging staff. Reducing anxiety and fear may have a positive effect on imaging, because involuntary motion may be reduced and there may be improvement in the patients' comfort and in their overall experience with the imaging procedure, this has been supported by Perception surveys, indicating 75% of the respondents experienced a reduction in anxiety[3]

The goal of this current study is to assess the prevalence of various myths and fear of patients undergoing computed tomography of brain.

Methodology

The current study was cross-sectional in design and did not include data collected at follow-up time points. Participants were 132 patients of either gender between the ages of 18 and 60 years being referred for computed tomography of brain being referred from various departments for non traumatic reasons Between May 2016 and December 2016, a total of 132 patients consented to participate in this study. All consenting patients were provided with self reporting personal and socio demographic details. Further they were provided with a list with various myths and fear about CT Scan of brain

Tools

Socio-demographic Data Sheet: The socio demographic data sheet included age, gender, religion, Years of education and socio economic class of the patients. It also recorded provisional medical diagnosis. Additionally, few concerns about fear of closed space (claustrophobia), procedure-related radiation, administration of contrast, cost concern, risk of exacerbation of existing illness or development of new problem related with scan, risk of brain dysfunction, risk of cancer, risk of infertility or sexual dysfunction, risk of hair loss or skin rashes were also included for this survey.

Results:

A total of 132 patients (95 male and 37 female) were included for the study, the mean age of the sample was 38.34 years (SD= 10.83) ranging 24 years to 70 years. The mean education years for the sample was 9.74 years (SD= 2.07). The sample consisted of 87.2% of hindus, 69.8% of lower middle and 30.2% of middle upper socioeconomic class. The group of patients with exposure naive to CT scan consisted of 107 patients, whereas 30 were had history of past exposure. The 91 (69.9%) and 41(31.1%) of the sample were belonging to lower-middle and Middle-upper socio economic class respectively.

On survey 34.1 % people reported fear and apprehension about entering into CT scan machine. However 81.8 % of sample size was not aware of any knowledge about radiation and its hazard, and only 18.2 % were aware about radiation and its hazard so they were also apprehensive about the ill effect of radiation. Similarly 75 % of samples were not aware of contrast use and only 25 % of samples were worried about it. The survey also found that 51.5 % expressed their concern about the cost involved of CT scan. There was concern about developing new illness or exacerbation of existing illness among 19(14.4%) of this sample, similarly 10.6% sample was worried about brain dysfunction, 15.9% sample considered cancer a possible risk, 18.9% considered infertility, 14.4% considered sexual dysfunction, 23.5% considered Skin rashes and 12.9% considered hair loss as a possible side effects of ST scan. (Table -1)

Discussion

Many a patient in ours setting comes from rural and underprivileged class with huge expectation that CT scan will finally search out their defects that will lead to his or her complete recovery. Many a patients of tension headache or migraine, where neuro imaging is not indicated, insists for CT scan with undue pressure on treating physician. Similarly many a patients suggest and request for a CT scan for their own satisfaction, and at times they asks for a complete full body scan. However their knowledge, understanding and expectation may not be very correct. As survey of this study found that, most of the patients (81.8 % and 75%) were not aware of risk associated with radiation and contrast respectively. This emphasizes need of awareness and knowledge about radiation risks and contrast.

Previous studies also have found anxiety associated with CT scan procedure [4]. Ours finding was in accordance with where patients had anxiety constellation as claustrophobia in approximately 34% of sample. Concern about risk of radiation and contrast was 18.2% and 25 % respectively, which may be considered as low, and reflects lack of awareness and knowledge. The cost of CT scan is relatively low in government hospitals, but it remains most

common issue of concern in our sample (51.5%). Other issues are minor like risk of infertility, sexual dysfunction, skin problem and hair loss are minimal and a brief reassurance may be adequate to address the issues.

The merit of this study includes the novelty of the topic, specifically in Indian context. The current study has certain limitations, the study is conducted at a government teaching hospital with most of the sample were belonging to lower middle socioeconomic class and with a mean years of basic education was just below 10 years. These set of sample are deprived people and are susceptible and prone to develop myths. There should be representative data from higher socioeconomic status and well educated people who usually attend to big corporate hospitals.

Conclusion

In conclusion, this study reveals that cost of CT scan is the most common concern of patients undergoing CT scan along with Claustrophobia, radiation and contrast risk; there is lack of awareness that reflects with the myths of brain dysfunctions, risks of sexual dysfunctions, infertility, cancer, skin problem and hair loss.

TABLE - 1

		n	%
Mean age of the sample	38.34 ± 10.83 Years		
Mean years of education	9.74 ± 2.07 Years		
Gender	MALE	95	72.0
	FEMALE	37	28.0
Exposure no	Naive	102	77.3
	repeated	30	22.7
Religion	hindu	115	87.1
	others	17	12.9
Socioeconomic	lowermiddle	91	68.9
	middle upper	41	31.1
Claustrophobia	No fear	87	65.9
	sometimes	45	34.1
Radiation Risk	Not aware	108	81.8
	Aware	24	18.2
Contrast Risk	Not aware	99	75.0
	Aware	33	25.0
Cost concern	No	64	48.5
	Yes	68	51.5
New disease / Exacerbation risk	Not aware	113	85.6
	May be	19	14.4
Brain Dysfunctions	Not aware	118	89.4
	May be	14	10.6
Cancer risk	Not aware	111	84.1
	May be	21	15.9
Infertility risk	Not aware	107	81.1
	May be	25	18.9
Sexual dysfunction	Not aware	113	85.6
	May be	19	14.4
Skin Rashes risk	Not aware	101	76.5
	May be	31	23.5
Hair loss risk	Not aware	115	87.1
	May be	17	12.9

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