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Water Quality and Jaundice –Knowledge among people of Hyderabad

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ABSTRACT

Water quality is gaining importance in view of the large outbreaks of jaundice in the recent times. Survey is therefore conducted among 189 jaundice patients randomly selected from various hospitals in twin cities .Information about the knowledge related to water quality and its relation to jaundice were collected using a structured questionnaire . Majority of (87 percent) patients are from upper middle class and educated. Only 47 percent could relate jaundice to contaminated water, only 5 percent felt that water has to be treated. . For treatment of jaundice 56 percent believed in the use of local medicines and herbs only. It is necessary to conduct mass programs to make people know that maintenance of water quality is very important.

KEY WORDS:: Jaundice, water quality , contamination, herbs, water quality

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INTRODUCTION

Water is a precious natural resource. Water a life giving liquid can also be a life taking lethal fluid. Around 3.1 percent of deaths in the world are due to unhygienic and poor quality of water. Water is essential for file but it can and does transmit disease in countries all over the world .WHO predicts much of the worlds drinking water is contaminated by agriculture , industrial, pharmaceutical and domestic pollution.[1] One of the disease, related to water contamination is jaundice[2] . India is no exception, water pollution is becoming a serious problem.[3] .Water is polluted by nature and through human being, resulting in several water borne diseases[4,5] .In Shimla contamination of drinking water with sewage line caused jaundice and in Nagpur 150 jaundice cases were reported with contaminated water.[6,7] . In view of the major outbreaks and the quality of water is being questionable there is need to know the awareness of water quality and its relation to jaundice among people is felt necessary. . Such studies are scanty. The present study is conceived to assess the knowledge and awareness related to water quality and its relation to jaundice , also to study the perceived reasons for jaundice and its treatment.

METHODOLOGY

The survey was conducted on 189 patients, randomly selected from those affected with jaundice who have come to the hospital for treatment. Information on income: educational status, occupation, type family, reasons for occurrence of jaundice, dietary practices and causes for jaundice were collected using a pretested semi structures questionnaire. The results are presented as percentages.

RESULTS AND DISCUSSION

Socio Economic Profile:

Age wise distribution showed that 42 percent are above 30 years and 58 percent between 15-30 years. All families are nuclear with family size ranging from 3 to 6 members. Four families had one of the in laws staying with them. Average per capita monthly income ranged between Rs.20,000-1,00,000.. Those with Rs.50000/- to 1,00,000 / are 53 percent indicating that the patient belongs to higher middle class. Literate are 95 percent those with school education constituted 31 percent , college 57 percent and professional 8 percent while 5 percent are illiterate Occupational status showed that 66 percent are not earning (students or housewife), 24 percent are employed and business 10 percent (Table1)

Table 1 Income, Occupation and Educational status

Income	%	No.	Occupation	%	No.	Education	%	No.
20,000-50,000	13.2	25	Business	9.6	18	School	31.7	60
50,000-1,00,000	53	100	Professional	26.9	51	College	63.5	120
1,00,000-2,00,000	33.8	64	Not earning	63.5	120	Illiterate	4..8	9
Total	100	189	Total	100	189	Total	100	189

Most of the patients (80%) said that jaundice can occur in any season as it is related to water and food, while 20 percent believed that it occurs in rainy season as the rain water washes the dust and dirt into collection points. Most of the patients (80%) expressed that jaundice can occur in any age group Others expressed that it occurs mostly in children (13%) and 7 percent among adolescents , non-vegetarian constitute 87 percent and 13 percent are vegetarians .Causes of Jaundice as perceived by patients is given in Table2.

Table 2 Causes for Jaundice as Perceived by the Patients.

Particulars	**%**	**No.**
Eating of Non vegetarian foods during fever	26.9	51
Consumption of contaminated food and water	46.7	88
Malfunction of liver, hyper –secretion of bile	13.2	25
Contaminated food /eating flesh foods during fever	13.2	25
Total	100	189

The perceptions are eating non vegetarian foods during fever (26.9%), consumption of contaminated food and water (46.7%) while others 26.4 percent indicated the malfunction of liver or eating contaminated food and flesh foods during fever .

Certain diet prescriptions and restrictions were indicated when the individual is suffering with jaundice. (Table 3) Food restrictions are followed for 3 to 4 months even after complete recovery, to avoid any relapse.

Table 3 Foods Avoided and Recommended during Jaundice

Foods Avoided	%	No.	Foods Recommended	%	No.
Turmeric	46.7	88	Milk	20.1	38
Tamarind	40.2	76	Pulses	33.9	64
Brinjal	13.2	25	Coconut water	33.9	64
Flesh foods & oily foods	13.0	70	Toddy/barley water	13.8	26
Milk	6.9	13	Sugar cane juice	13.2	25
Spicy foods	26.9	51	Rice with chili powder	6.9	13
Gogu Leaves	6.9	13	Rice flakes ,Puffed rice Corn flakes	20.1	38
Pickles	13.2	25	Food with no fat	13.2	25
Potato	13.2	25	Soft Cooked rice	33.9	64
Oily foods	46.7	88	Fruits	47.1	89

Foods restricted include – non-vegetarian foods (flesh foods) and oily foods by 87 percent .spicy foods by 27 percent, avoidance of pickles by 13 percent, turmeric and tamarind by 87 percent, milk is avoided by 17 percent due to less appetite and it is considered to cause vomiting. Brinjal (eggplant) was restricted by 27 percent. Major food considered aggravating the conditions are flesh foods and foods with oil and spices although they could not explain why there restricting them.

Foods recommended are consumption of copious amount of coconut water, toddy, sugar cane juice and barley water, foods with little or no fat. Fruits, coconut water and soft cooked rice are given priority as considered to have little or no fat, nutritious and easily digestible.

Rice flakes and dhal are believed to help in decreasing the yellowness from the body. idly with sugar is given as breakfast or any time the patient feels hungry Rice with chili powder helps in removal of toxic nature of the jaundice.

Five percent of the patients indicated that the water should be treated. The treatment suggested was chlorinating of water by authorities, filtration at household level or use of aqua guard to rinse water. One patient said that water should boiled at household level .

The knowledge that contaminated food and water can cause jaundice is reported by 47 percent , they are the educated group and those who were advised by the doctor due to the onset of the disease.

Thirteen percent indicated that jaundice is due to nonfunctioning of liver and hyper secretion of bile. While another 13, percent indicted the use of contaminated food and water during fever, which led to jaundice. Nine of them could explain what could be the source of contamination and what precautions are required to prevent the occurrence of jaundice **Table 4 deleted as it is in the text.**

To conclude it is clear that patients are not aware of the importance of the quality of water and its importance. There is a need to conduct mass education programs on the parameters used for water quality and how people can assess and monitor water quality.

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