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Knowledge, attitude and perception of pregnant women towards hepatitis E vaccination

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Abstract--Background: Hepatitis E is an acute viral hepatitis which can significant complications and even death during pregnancy if left untreated. Objective: Assessment of the knowledge, attitudes and perceptions (KAP) of Pregnant Women towards Hepatitis E vaccination. Materials and Methods: The study was cross sectional in design was done at Maqsood Medical Complex General Hospital from September 2022 till Feb 2023. The sampling technique was non probability convenient sampling. The inclusion criteria were pregnant females in all the trimesters and exclusion criteria were non pregnant women and those with history of molar pregnancies. Results: Regarding knowledge, 87% of the study population had heard of hepatitis E as a potential disease that can cause harm during the pregnancy and 50% heard of protective vaccine for it whole 20% didn't heard about and 30% didn't have any idea about it at all. While assessing the perceptions of the patients about screening for hepatitis E infecton.47% were screened for hepatitis E and 53% didn't have any screening test for the virus.80% considered it to be important to

vaccinated against hepatitis E. Regarding attitudes 30% strongly agreed that they are at risk of getting hepatitis E infection while 40% agreeing for it . 20% expressed their strong willingness to get vaccination and 40% agreed to get vaccinated. Conclusion: From the above results one can conclude that there was some awareness among pregnant women regarding hepatitis E vaccination but there is a need for greater efforts in this regard.

Keywords--hepatitis, vaccination, pregnant.

Introduction

Viral hepatitis has evolved over the last few years in terms of clinical course, diagnosis and treatment.¹ Amongst them hepatitis E is certainly the one that has puzzled even the experienced hepatologists and scientists as far as the sensible and most appropriate line of management of concerned . Prevention is better than cure is universal truth that works for almost all the major ailments be it gastroenteritis , enteric fever and even infective hepatitis B and C which can get transmitted by unsterilized needles and unscreened blood. ²Hepatitis E treatment though conservative has received a major hope of prevention as there is vaccine by the name of Hecolin that has been approved by renowned health bodies for administration to even normal individuals what to talk of critical patient like chronic liver disease or liver cirrhosis where the mortality due to the disease can be greatest as result of underlying acute liver failure. ³

One of the most challenging population in which hepatitis E management has been really difficult are pregnant women who already experience symptoms due to other diseases of liver. They include acute fatty liver of pregnancy, cholestasis of pregnancy and HELLP Syndrome, leading to major complications requiring expeditious measures including immediate caesarean section and abrupt control of blood pressure as well as fits.⁴ With the discovery of vaccine now there is ray of hope and some lightening at the end of the tunnel. It's important to explore the knowledge, perceptions and attitudes of pregnant women towards hepatitis E vaccination as it is a major upheaval and a cause of greatest mortality especially during the third trimester.⁵ While the literature is still deficient in terms of vaccinating pregnant women against the hepatitis E and there are still some question marks about its safety ,this study will be a first step as way forward in this direction.⁶ The objective of this study will be the assessment of knowledge, perception and attitudes of pregnant women towards hepatitis E vaccination.

Materials and Methods

The study was cross sectional in design done at Maqsood Medical Complex General Hospital from September 2022 till Feb 2023. The sampling technique was non probability convenient sampling. The inclusion criteria were pregnant females in all the trimesters and exclusion criteria were non pregnant women and those with history of molar pregnancies. The rationale of the study was clearly explained to the participants and well informed consent was taken. Patients did have routine antenatal investigations like Ultrasound.

Data Analysis

Data entry as well analysis was done by SPSS latest version. The frequencies and percentages were utilized for categorical data.

Results

Table 1
Demographic Profile of Study Participants(n=150)

	Frequency	Percent
Age		
<20 Years	40	26.67%
20-40 Yeats	80	53.33%
40-60 Years	30	20.00%
Education		
Illiterate	50	33%
Elementary	15	10%
Inter	25	17%
High School	11	7%
University	15	10%
Graduate	34	23%
Trimester		
1 st	42	28%
2 nd	64	43%
3 rd	44	29%

In this study total 150 women were interviewed regarding knowledge, attitude and their perception towards Hepatitis E during pregnancy. Table-1 describes the demographic characteristics of the women.

Knowledge, Attitude and Perception of Study Participants towards Hepatitis E

Knowledge (n=150)	Yes	No	DK		
Have you heard about Hepatitis E	87%	13%	-		
There is vaccination of Hepatitis E	50%	20%	30%		
Perception (n=150)	Yes	No	DK		
Have you ever screened for Hepatitis-E infection	47%	53%	-		
Have you ever taken Hepatitis-E vaccination	40%	60%	-		
Have you ever done Hepatitis-E vaccination antibody test	13%	87%	-		
Do you consider it important to be vaccinated for Hepatitis-E in pregnant females?	80%	20%	-		
Attitude (n=150)	SA	A	US	DA	SDA
You are at risk of getting Hepatitis-E infection	30%	40%	15%	15%	0%
Are you willing to be screened for Hepatitis-E vaccination during an antenatal care visit	40%	10%	30%	20%	0%
Are you willing to get Hepatitis E vaccination	20%	40%	20%	10%	10%

SA=Strongly Agree, A=Agree, US= , DA= Disagree, SDA= Stronglydisagree

Regarding knowledge , 87% of the study population had heard of hepatitis E as a potential disease that can cause harm during the pregnancy and 50% heard of protective vaccine for it whole 20% didn't heard about and 30% didn't have any idea about it at all. While assessing the perceptions of the patients about screening for hepatitis E infecton.47% were screened for hepatitis E and 53% didn't have any screening test for the virus.80% considered it to be important to vaccinated against hepatitis E.Regarding attitudes 30% strongly agreed that they are at risk of getting hepatitis E infection while 40% agreeing for it . 20% expressed their strong willingness to get vaccination and 40% agreed to get vaccinated.

Table 4
Association of Age and Trimester with Knowledge and Perception of Study Participants

Knowledge	Age			p-value	Trimester			p-value
	<20	20-40	40-60		1 st	2 nd	3 rd	
	40	80	30		42	64	44	
Have you heard about Hepatitis E	20	70	15	<0.001	30	50	30	0.490
There is vaccination of Hepatitis E	20	50	10	0.021	33	39	24	0.265
Perception								
Have you ever screened for Hepatitis-E infection	20	46	0	<0.001	27	40	24	0.603
Have you ever taken Hepatitis-E vaccination	25	44	15	0.560	36	43	22	0.001
Have you ever done Hepatitis-E vaccination antibody test	10	12	5	0.396	10	5	17	<0.001
Do you consider it important to be vaccinated for Hepatitis-E in pregnant females?	22	71	19	<0.001	30	20	15	<0.001

Table-4 describes the association of knowledge and perception with age and trimester of women. Only one question regarding knowledge and three question regarding perception showed no significant association with age of women in this study.The remaining questions regarding knowledge and perception were significantly associated with age of women.Only one question (heard about Hepatitis-E) from knowledge and three questions (acquiring needle stick injury, antibody test for hepatitis E, screening of Hepatitis-E) from perception showed no significant association with trimester of women. All other questions in knowledge and perception domain showed statistically significant association with trimester of women.

Discussions

This study showed that overall there is a satisfactory level of awareness of pregnant women about hepatitis E vaccination in terms of appropriate knowledge, perception and attitudes. According to results of this study, 87% of the study population had heard of hepatitis E as a potential disease that can cause harm during the pregnancy and 50% heard of protective vaccine for it while 20% didn't heard about and 30% didn't have any idea about it at all. While assessing the perceptions of the patients about screening for hepatitis E infection, 47% were screened for hepatitis E and 53% didn't have any screening test. There has been a lot of alarm about the potential complications during pregnancy including increasing mortality. According to World Health Organization, pregnant women especially in later phases of pregnancies are at enhanced risk of developing acute liver failure and around 20-25% die during the third trimester.⁷

According to one guidance published by Premashis in 2019 about the management of hepatitis E during pregnancy reported that it is essential to treat hepatitis E well on time as infection with especially genotype 1 or 2 in last months of pregnancy has resulted in poor maternal and foetal outcomes including troublesome foetal distress, intrauterine death and even life threatening fulminant liver failure.⁸ The treatment has been mainly supportive with diligent monitoring of liver function tests and this guidance doesn't advise the termination of pregnancy as final line of action for such patients.⁹

According to another study "Hepatitis E infection during pregnancy" by Chuchen Wu, suggested though it causes self limiting viral hepatitis, in pregnant females it takes a more dangerous course causing about 30% mortality.¹⁰ Additionally there has increasing incidences of preterm labor and keeping in mind that hepatitis E during pregnancy can result in disastrous outcomes, more studies should focus on its prevention and treatment strategies during pregnancy. The acute hepatitis can last for few weeks so it is of paramount importance to screen patients when they develop symptoms like nausea, vomiting, icterus, discolored urine and pale stools. In immunocompromised the illness takes longer to settle and can take 4-6 weeks requiring more care and vigilance on the part of treating physicians.

Supporting the above another study for assessing fetomaternal outcomes of hepatitis E in pregnancy published in 2012 in journal of CPSP came to a conclusion that hepatitis E runs a fulminant course during pregnancy with very high mortality in 3rd trimester and immediate period after the child birth.¹¹ So it is inevitable to screen such patients for hepatitis E during pregnancy to reduce the potential risk of dying from it. This study results although reasonable level of awareness of hepatitis E amongst pregnant females does necessitate that further studies should emphasize on hepatitis E vaccination in pregnant women though the data is quite limited on its potential success.

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