Chinese Journal of Experimental Traditional Medical formulae

A STUDY TO ASSESS THE LEVEL OF KNOWLEDGE REGARDING TORCH INFECTION AMONG ANTENATAL MOTHERS IN SELECTED HOSPITALS WITH A VIEW TO DEVELOP INFORMATION BOOKLET ON TORCH INFECTION.

Mrs. Avnee Naik[1a*], Mr. Sahil Chowhan[2b] Mr. Prachit Awate[3b] Mr. Ronak Kawade[4b] Mr. Vedant Mathurkar[5b] Ms. Pradnya Suralkar[6b]

a. Assistant Professor, DES Smt. Subhadra K. Jindal College of Nursing, Pune
b. Final Year Basic B.Sc. Nursing Students, DES Smt. Subhadra K. Jindal College of Nursing, Pune.
*Corresponding AUthor

ABSTRACT

Background: All of the TORCH infections can affect people of any age or sex. However, the term TORCH is only used when it applies to pregnant women and their unborn or newborn children. As a group, TORCH infections represent a common cause of birth defects. They can cause still births in the delivery of a dead baby. Recurrent pregnancy loss is defined as three or more consecutive spontaneous losses of pregnancy. Despite the tremendous scientific and technological advance`s it has remained a dilemma. It's still remains' a diagnostic challenge and frustrating therapeutic experience to most obstetricians. It is a highly frustrating experience for the patient. Despite great advances made by the modern science and cutting edge technology, the large number of cases, almost 43% are still classified as due to unknown etiology. Known etiological factors include anatomical defects in Mullerian tract, TORCH infections, immunological problems. Many modern therapies, which are in 2 current uses, do not lead to a successful pregnancy outcome, resulting in great frustration to the patient and also to the obstetrician. Immunology plays a significant role in the pregnancy. **Material and method:** The present study represents non-experimental exploratory descriptive design research design was used to assess the knowledge regarding TORCH infection in selected hospital of Pune city. The self-structured questionnaire and self-structured checklist was used for data collection. The data collection was carried out by using knowledge questionnaires and data was analyzed by using descriptive and inferential statistics. **Result:** The result revels that knowledge among antenatal mother regarding TORCH infection is poor (88%), average is 12% and 0% good. **Conclusion:** A study was conducted to assess the level of knowledge regarding TORCH infection among antenatal mothers in selected hospitals. With the help of self- structured questionnaire data was collected to assess the level of knowledge regarding TORCH infection among antenatal mothers in selected hospitals. Among this data the maximum number of antenatal mother having poor knowledge which is 88 %. After that, 12 % of antenatal mother have average knowledge. And 0 % of antenatal mother have good knowledge. With the help of checklist data was collected to assess the level of knowledge regarding TORCH infection among antenatal mothers in selected hospitals. The study revealed that maximum number of antenatal mothers has poor knowledge.

Keywords: TORCH infection, Antenatal mothers, Knowledge, Hospital, Information booklet

INTRODUCTION

Pregnancy is unique exciting and often joyous time in a women`s life as it highlights the women`s amazing, creative, and nurturing powers while providing a bridge to a future. The growing fetus depends entirely on its mother`s healthy body for all needs not only the mother but the entire family is eager for new arrival therefore mother`s health is foremost. Any signs of illness in the mother's condition will be despairing for the mother as well as the family. So it is indispensable to take care of the mother throughout the pregnancy and essential to avoid exposure to infection. Problems like bleeding, hyperemesis gravid arum, hypertensive disorder, diabetes mellitus, anemia, urinary tract infection in pregnancy, infections like Toxoplasmosis, Rubella, Group B streptococcus, TORCH infection may complicate the pregnancy.[1]

TORCH infection refers to group of infectious diseases that affect the fetus or newborn baby. They transmitted to the fetus during pregnancy, child birth or shortly after the birth by breast milk. TORCH infection can have serious implications for baby due to im-mature immune system and it can prevent babies organs from developing properly. In India pregnant women belonging to low social economic group may be exposed to variety of infection due to poor environmental hygiene.[2]

The term TORCH complex or TORCH infection refers to the congenital infections of toxoplasmosis, others (Syphilis, Hepatitis B), rubella, Cytomegalovirus (CMV), and herpes simplex. These are caused by Toxoplasma Gondi, Treponema pallidum, Hepatitis B virus, Rubella virus, cytomegalovirus, and herpes virus simplex (HSV) viruses respectively. Other pathogens associated with congenital infections include human immunodeficiency virus (HIV), parvovirus, and varicella virus.[3]

NEED OF THE STUDY

Pregnancy is a period of great anabolic activity, when the most rapid rate of growth takes place. It is a condition in which the fetal growth is accompanied by extensive changes in the maternal body composition and metabolism. Mother and children not only constitute a large group, but they are also a "vulnerable" or special risk group, the risk is connected with Childbearing in the case of women. Certain infections collectively called TORCH infections can produce Stillbirths, congenital anomalies, abortions, blindness, severe deafness and mental retardation in the offspring's. That may be acquired in utero or during the birth process causing heavy morbidity to both mother and child. [7]

The first trimester is usually the most dangerous time for the mother to catch these infections quite a great risk of the fetus also being affected during this stage. The risk to baby depends on the particular stage of pregnancy and for each infections it varies e.g. First trimester for rubella or at delivery for herpes simplex virus etc., with such a serious implications it becomes important to diagnose TORCH infections so as to treat as well as help to decide about termination of pregnancy. The onus is therefore not only to detect the maternal infections but once detected it is important to know whether the fetus is also infected or not.[8]

A study was conducted on Primary TORCH infections in the mother can lead to severe fetal anomalies or even fetal loss. A prospective study was designed to detect the seroprevalence of IGm antibodies to Toxoplasma gondii, rubella virus and cytomegalovirus and igg antibodies to Herpes simplex virus type

Vol. 25, No. 1. (2025)
E ISSN: 2097-1494

1 and 2. One hundred and twenty pregnant women presenting to the antenatal clinic of a tertiary health center were included in this study. Out of these 120 women, 112 (93.4%) had evidence of one or more infections. Prevalence of IGg antibodies to HSV was 70% seroposivities for toxoplasmosis, rubella and CMV respectively were 11.6, 8.3 and 20.8%. Our data demonstrating high frequency of primary infections during pregnancy support the conclusion that routine prenatal TORCH screening is justified TORCH can cause serious, permanent birth defects.[9]

AIM OF THE STUDY

To assess the level of knowledge regarding TORCH infection among antenatal mothers in selected hospitals with a view to develop information booklet on TORCH infection.

RESEARCH METHODOLOGY

Objectives

1. To assess the knowledge regarding TORCH infection among the antenatal mothers.
2. To find out association between the knowledge regarding torch infection among antenatal mother's with selected demographic variable.
3. To develop an information booklet regarding TORCH infection.

Research Type:

Non-experimental exploratory descriptive study

Research design: The research design used in this study is non-experimental exploratory descriptive design.

Research Approach: The research approach adopted for the present research is Quantitative Descriptive Research approach because the studyaimed to assess the level of knowledge regarding TORCH infection among antenatal mothers in selected hospitals with a view to develop information booklet on TORCH infection.

Research setting: The setting for this study is Kamala Nehru hospital (Regulatory PMC) in Pune city.

Sample: In this study, the sample selected for the present study antenatal mothers in the age 18-45 year from the selected hospitals of Pune city.

Sample size: The sample size selected for the present study is 100 antenatal mothers of the age group (18-45) year in the selected hospitals of Pune city.

Sampling technique: The sampling technique used in the study was purposive sampling technique. The investigator preferred to choose this sampling technique because of the constrain of time and in order to complete the data collection within the stipulated time.

Data collection technique and tool: The present study was aimed to assess the level of knowledge regarding TORCH infection among antenatal mothers in selected hospitals with a view to develop information booklet on TORCH infection. Thus, a structured questionnaire tool was prepared and used for data collection.

Vol. 25, No. 1. (2025)
E ISSN: 2097-1494

Development and description of the tool:

A self-structured questionnaire is developed for the "Assessing the level of knowledge regarding TORCH infection among antenatal mothers in selected hospitals with a view to develop information booklet on TORCH infection"

Section 1-

This section included items seeking information on demographic profile of sample such as antenatal mother's age, education, religion, type of dietary pattern, locality, parity, gestational week, number of miscarriages, previous knowledge about TORCH infection, if yes source of information. It consists of demographic variables.

Section 2-

It compressed knowledge questionnaire total 32 questions knowledge regarding TORCH infection among antenatal mothers. Total score divided as poor, average and good.

Statistical analysis: A study was conducted to assess the level of knowledge regarding TORCH infection among antenatal mothers in selected hospitals and with the help of questionnaire the data was collected.

RESULTS

The present study represents non-experimental exploratory descriptive design research design was used to assess the knowledge regarding TORCH infection in selected hospital of Pune city. The self-structured questionnaire and self-structured checklist was used for data collection. The data collection was carried out by using knowledge questionnaires and data was analyzed by using descriptive and inferential statistics. The result revels that knowledge among antenatal mother regarding TORCH infection is poor (88%), average is 12% and 0% good.

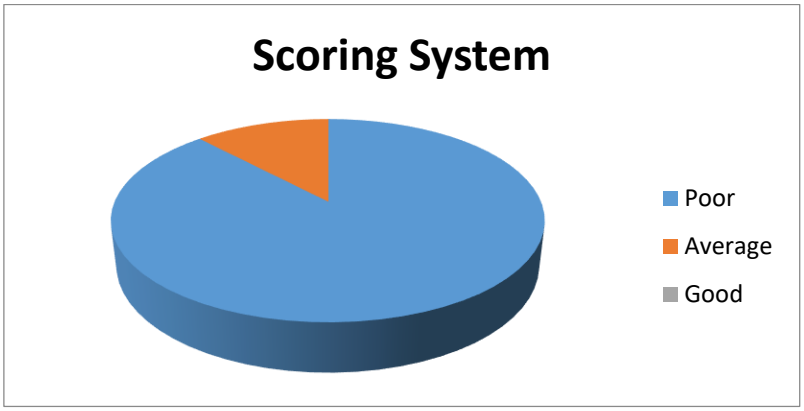
Table no. 1: The following table represents the Score for knowledge regarding TORCH infection among Antenatal mothers.

Total minimum Score: 0

Total maximum score: 32

N=100

Sr. no.	Grading	Frequency	Percentage
1.	Poor (0-10)	88	88%
2.	Average (11-21)	12	12%
3.	Good (22-32)	0	0%



DISSCUSSION

The study was proposed to assess the level of knowledge regarding TORCH infection among antenatal mothers. Sample size 100 was taken from selected hospital of the city. A self-structured questionnaire is developed for the "Assessing the level of knowledge regarding TORCH infection among antenatal mothers in selected hospitals with a view to develop information booklet on TORCH infection "The content validity and reliability of the tool was done, which suggested that the tool was reliable. The pilot study was done on the 10 samples and found that samples are available for the final study.

On the basis of objectives, the collected data was analyzed.

1. To assess the knowledge regarding TORCH infection among the antenatal mothers.
2. To find out association between the knowledge regarding torch infection among antenatal. Mother's with selected demographic variable.
3. To develop an information booklet regarding TORCH infection.

The result revels that knowledge among antenatal mother regarding TORCH infection is poor (88%), average is 12% and 0% good.

MAJOR FINDINGS OF THE STUDY

Section 1: Demographic profile

The maximum number of age group of antenatal mothers is between 18 years to 23 years among the samples. Among the samples majority of mothers were having primary education. The maximum number of sample participated in study were having Hindu religion. The locality of maximum mothers is urban locality. Maximum number of mothers are non-vegetarian. Among the sample maximum mothers are multi-parity in state. The maximum number of mothers was having gestation of 29-40 weeks. Among the samples majority of antenatal mothers were having 0 numbers of miscarriages. Among the samples maximum of mothers were not having previous knowledge about TORCH infection.

Section 2: Assess the level of knowledge regarding TORCH infection.

Present study reveals that majority of samples have poor knowledge that is (88.00 %), 12 %samples having average knowledge. And 0 %samples having good knowledge regarding TORCH infection.

Vol. 25, No. 1. (2025)
E ISSN: 2097-1494

Section 3: Association of socio demographic variables and level of knowledge regarding TORCH infection.

The findings revealed that the association between the level of knowledge regarding TORCH infection are significant to the sociodemographic variables like age, education, religion, locality, type of diet, parity, gestational week, number of miscarriages, previous knowledge about TORCH infection, if yes then source of information. Cannot be made because there were no a single sample found having a good level of knowledge and therefore the analysis can't be done.

CONCLUSION

A study was conducted to assess the level of knowledge regarding TORCH infection with the help of a questionnaire data was collected to assess the level of knowledge regarding TORCH infection. Among this data the maximum number of antenatal mothers are having poor level of knowledge which is 88%. After that, 12 % of antenatal mothers have average knowledge. And 0% of antenatal mothers have good knowledge. The study revealed that maximum number of antenatal mothers has poor level of knowledge regarding TORCH infection. The study's findings underscore the critical need for awareness and education on TORCH infections among antenatal mothers. Given the significant percentage of women with poor knowledge, it's essential to integrate targeted health education programs into prenatal care. The informational booklet developed from this study can serve as a valuable tool in enhancing awareness and promoting preventive measures, ultimately contributing to better maternal and fetal health outcomes. Healthcare providers can play a vital role in disseminating this information, ensuring that pregnant women receive accurate and timely guidance to safeguard their health and the health of their babies. By empowering antenatal mothers with knowledge, we can reduce the risk of TORCH infections, minimize complications, and promote healthier pregnancies. Effective education and awareness initiatives can have a lasting impact on maternal and child health, making this an essential aspect of prenatal care.

Conflict of Interest: There is no involvement in any organization or entity with any financial or non-financial interest in the subject matter or materials discussed in this paper.

Funding Source: There is no Funding Source for this study.

REFERENCES

1. Bianchi FP, Stefanizzi P, Diella G, Martinelli A, Di Lorenzo A, Gallone MS, Tafuri S. Prevalence and management of rubella susceptibility in healthcare workers in Italy: A systematic review and meta-analysis. Vaccine X. 2022 Aug 7; 12:100195. doi: 10.1016/j.jvacx.2022.100195. PMID: 36032697; PMCID: PMC9399279.

2. Manjunathachar HV, Singh KN, Chouksey V, Kumar R, Sharma RK, Barde PV. Prevalence of torch infections and its associated poor outcome in high-risk pregnant women of Central India: Time to think for prevention strategies. Indian J Med Microbiol. 2020 Jul-Dec;38(3 & 4):379-384. doi: 10.4103/ijmm.IJMM_20_136. PMID: 33154250.

3. Al-Hakami AM, Paul E, Al-Abed F, Alzoani AA, Shati AA, Assiri MI, Qasim AA, Riaz F, Moosa RA, Chandramoorthy HC. Prevalence of toxoplasmosis, rubella, cytomegalovirus, and herpes (TORCH) infections among women attending the antenatal care clinic, maternity hospital in Abha, Southwestern Saudi Arabia. Saudi Med J. 2020 Jul;41(7):757-762. doi: 10.15537/smj.2020.7.25121. PMID: 32601646; PMCID: PMC7502919.
4. Kaur R, Gupta N, Nair D, Kakkar M, Mathur MD. Screening for TORCH infections in pregnant women: a report from Delhi. Southeast Asian J Trop Med Public Health. 1999 Jun;30(2):284-6. PMID: 10774696.
5. Deka S, Kalita D, Paul M, Badoni G, Mathuria YP. Seroprevalence and Determinants of ToRCH Pathogens in Pregnant Women in the Sub-Himalayan Region. Cureus. 2022 Feb 5;14(2):e21946. doi: 10.7759/cureus.21946. PMID: 35273887; PMCID: PMC8902136.
6. Dinkar A, Singh J. Seroprevalence of Toxoplasma, Rubella, CMV and HSV infection at a teaching hospital: A 7 year study from North India. J Family Med Prim Care. 2020 May 31;9(5):2253-2257. doi: 10.4103/jfmpc.jfmpc_176_20. PMID: 32754483; PMCID: PMC7380779.
7. Warnecke JM, Pollmann M, Borchardt-Lohölter V, Moreira-Soto A, Kaya S, Sener AG, Gómez-Guzmán E, Figueroa-Hernández L, Li W, Li F, Buska K, Zakaszewska K, Ziolkowska K, Janz J, Ott A, Scheper T, Meyer W. Seroprevalences of antibodies against ToRCH infectious pathogens in women of childbearing age residing in Brazil, Mexico, Germany, Poland, Turkey and China. Epidemiol Infect. 2020 Oct 30;148:e271. doi: 10.1017/S0950268820002629. PMID: 33124529; PMCID: PMC7689786.
8. Mocanu AG, Gorun F, Ciohat I, Navolan D, Malita D, Vilibic-Cavlek T, Dahma G, Neamtu R, Popescu D, Cioca A, Craina M. Simultaneous Seroprevalence to Toxoplasma gondii, Cytomegalovirus and Rubella Virus in Childbearing Women from Western Romania. Medicina (Kaunas). 2021 Sep 2;57(9):927. doi: 10.3390/medicina57090927. PMID: 34577850; PMCID: PMC8469601.
9. Nabizadeh E, Ghotaslou A, Salahi B, Ghotaslou R. The Screening of Rubella Virus, Cytomegalovirus, Hepatitis B Virus, and Toxoplasma gondii Antibodies in Prepregnancy and Reproductive-Age Women in Tabriz, Iran. Infect Dis Obstet Gynecol. 2022 Jan 10;2022:4490728. doi: 10.1155/2022/4490728. PMID: 35046632; PMCID: PMC8763548.