

AWARENESS ABOUT UROGENITAL TUBERCULOSIS

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ABSTRACT

UGTB stands for urogenital tuberculosis which affects our urinary as well as genital system. It is a bacterial disease caused by *Mycobacterium tuberculosis*. The symptoms may include urination with pain, blood in urine, ulcer etc. It may affect kidneys, ureters, urinary bladder, testis and even penis etc. Various tests are performed to diagnose the disease like urine culture, urography etc. After diagnosis, treatment is started depending upon the stage. Many factors lead to UGTB including immunological as well as environmental. This study had a basic objective of raising knowledge about this disease. Questionnaires were prepared about the etiology, popularity, transmission and treatment of disease. People were asked about the questions. Their replies were arranged in the forms of tables. A final table was inserted showing the final assessment of results. It was good attempt in the sense that questionnaire based studies have been given great importance in present days.

KEYWORDS: UGTB, Epididymis, *Mycobacterium Tuberculosis*, Urography, AIDS

INTRODUCTION

Urogenital tuberculosis is a disease affecting urinary system as well as genital system. It is bacterial disease. It often develops in the persons with tuberculosis in some other body parts. It attacks on the urogenital tracts and respective organs. For example, it may affect kidneys, ureters or urinary bladder and then called the tuberculosis of that body part. Similarly, it may attack on epididymis, testis or directly the orgasms like penis. It usually has no clear symptoms in the beginning and may appear after a longer exposure to the infection. It is caused by *Mycobacterium tuberculosis* or *Mycobacterium bovis*. Its symptoms may include frequent urination, pain while urinating, secretion of blood and pus along with the urine, ulcer, formation of mass of cells on side of scrotum and the person may feel need to urinate even when the urinary bladder is empty. It is becoming very common in recent times. The pathogen may prevail in our body without showing disease symptoms. In kidneys, its symptoms are pain and the person may get fever as well. UGTB of urinary bladder is shown initially in the forms of lesions but a prolonged tuberculosis of urinary bladder is exhibited in the form contracted urinary bladder. In the case of genital system, the disease may start from epididymis, and then pass to testis via vas deferens. It may cause pain in scrotum and its redness due to rashes. This disease may also affect the penis because the skin of penis is most susceptible to infections. It may also lead to the ulcer of penis or may cause cancer in the organ if chronic infection occurs. So, there is no way to declare this disease as harmful or harmless as it all depends upon the condition of infection. This disease may be diagnosed easily when the symptoms are obvious. But when it is not recognized by simple symptoms, certain tests are performed to diagnose and confirm the disease and its stage so that proper treatment and medication should be started like Mantoux test which is the test for tuberculin test, urine test by culturing to ensure the presence of bacterium

in the urine, sputum test etc. the disease can also be diagnosed by using techniques like PCR and CT. Urography can also be done to check the disease. The treatment is also different for different types and stages. For initial and less acute stages, the preventive measures along with intake of antibiotic medicines are enough to control the disease. For severe infections, other methods of treatment are applied like chemotherapy and surgery. The time period of complete course of GUTB varies between 4 to 12 months depending upon the condition. The disease is caused by Mycobacterium. This genus has many species. Mycobacterium is a bacterial genus belonging to the phylum Actinobacteria and order Actinomycetes. The suborder of Mycobacterium is Corynebacterianae and the family is Mycobacteriaceae. It is also classified into certain groups like Mycobacterium bovis, Mycobacterium africanum, Mycobacterium leprae, Mycobacterium microti etc. and all these mentioned types are nontuberculous as they don't usually cause TB.

There is a diversified group of Mycobacterium which causes TB. Mycobacterium is a group of rod shaped bacteria which are either saprophyte that live on dead organic material or live as obligate intracellular parasite in diseased cells. Most types are virulent. The type of Mycobacterium causing UGTB may reside a person without showing disease symptoms. This type has tough cell wall resistant against acids and alkalis. They can neither be characterized as gram positive nor gram negative bacteria and cannot be stained by Gram staining technique. According to an estimate of WHO, almost one third humanity is infected by this bacterium. This type of Mycobacterium affects 150 million people every year. The major causes of UGTB are different. Most often the people who had TB in some other part of body may get this infection. Similarly, the people with dropped or suppressed immune system are also susceptible to the infection especially HIV victims. Besides these factors, it has been noted that most of affected persons belong to the area where sanitation condition is poor and people have no proper system of sewage and disposal wastes. Besides the metabolic and immunological factors, there are some environmental factors as well. These include alcoholism, drug abuse, moving from one place to another, malnutrition, intake of intravenous drugs and careless physical relationships. This disease can be transmitted by sexual intercourse with infected persons but this usually occurs in very rare cases. So this disease is not classified as sexually transmitted diseases. If this disease is diagnosed in beginning, the treatment begins earlier and the severity of the infection is prevented. This study was done on Urogenital tuberculosis shortly known as UGTB. The objective of the present study was to evaluate the knowledge about the bacterial disease urogenital tuberculosis.

MATERIALS AND METHODS

Questionnaires were prepared about the various points relating to the disease and the general consent of the people was taken. Total 76 numbers of participants took part in this survey and expressed their thoughts based on the real experiences. 4 questionnaires were prepared on the etiology, popularity, transmission and treatment methods of urogenital tuberculosis. It was asked from the people to tell what they thought the disease was like bacterial, fungal, viral etc.

Then, they were interviewed about question that either they, their family member, relative, friend or neighbor ever suffered from this disease. People were also asked about their opinion regarding the transmission of disease. Opinions on the treatment of disease were also taken from these 76 people. Four tables were drawn to sum up the answers.

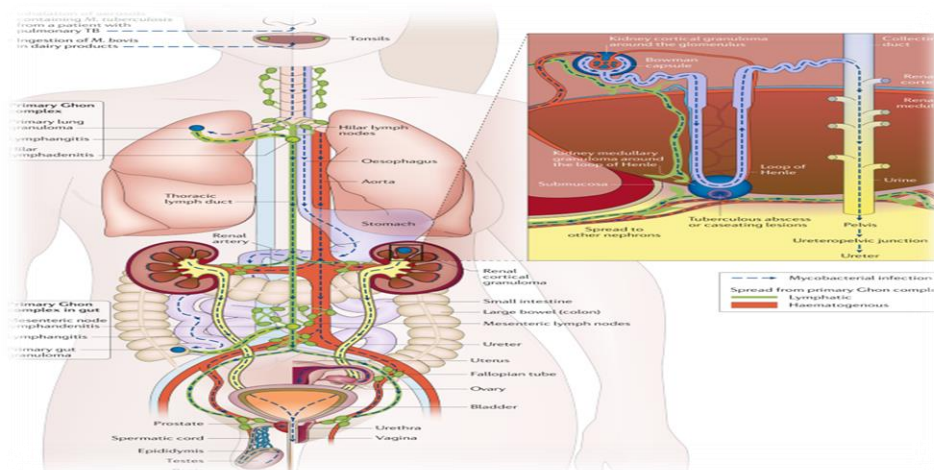


Figure 1

Awareness about UGTB among University Students

Views of Postgraduate Biology Students about Urogenital Tuberculosis

Table 1 is about the questionnaire to know about the awareness on the etiology of urogenital tuberculosis. In total 76 students who participated in this study, 1 said that UGBT was a viral disease 75 expressed opposite answer. Out of these 75, 15 were males and 60 were females. Similarly, 75 people said that it was a bacterial disease out of which 15 were males and 60 were females and only 1 female thought that it was not a bacterial disease. 10 people thought that disease was of genetic basis in which all were females while 66 did not thought so. The question about metabolic basis of this disease was answered yes by 14 and no by 62. All these results are arranged in this table form.

Table 2 was drawn to summarize the results of second questionnaire. In second questionnaire, it was asked from the participants whether they themselves, their family members, their relatives, neighbors or friends had ever suffered from UGBT. Different numbers of males and females expressed different answers which are given in the following table.

Table 3 shows Questionnaire was designed to know about the public opinion regarding the transfer of UGBT among the people through physical contact and blood transfusion as well as from parents to off springs. Out of total 15 males in the grand total of 76, 8 said that yes the disease could be transferred by physical contact and blood transfusion and 7 did not thought so. 30 females showed the opinion of transmission of this disease by either method while 31 disagreed. 1 male said that yes this disease could be transferred from parents to off springs while 14 males denied this possibility. 4 females were also having the opinion of transmission of this disease from parents to off springs while 57 had no such opinion.

Table 4 shows contained the information about the treatment of the disease in minds of public. Three questions were asked in this questionnaire. First question was that whether UGBT can be treated using medicines. In the answer of this question, 15 males and 53 females said yes as it could be treated using medicines according to their point of view while 8 females disagreed with this opinion. Second question was that if surgery was needed to be done to treat UGBT. Answering this question, 15 males and 56 females replied in no as the surgery was not needed while 5 females answered that surgery could be done.

Table 1: Questionnaire to Evaluate Etiology of UGTB

Source	Males	Yes	No	Females	Yes	No
Viral disease	15	—	15	61	1	60
Bacterial disease	15	15	—	61	60	1
Fungal disease	15	3	12	61	3	58
Genetic disease	15	—	15	61	10	51
Metabolic diseases	15	4	11	61	10	51

Table 2: Questionnaire to Evaluate the Popularity of UGTB

Suffered from UGBT	Males	Yes	No	Females	Yes	No
You	15	-	15	61	1	60
Your family member	15	2	13	61	5	56
Your relatives	15	6	9	61	5	56
Your neighbors	15	2	13	61	2	59
Your friends and colleagues	15	4	11	61	3	58

Table 3: Questionnaire to Know the Public Opinion about the Transmission of UGBT

Mean of Transmission	Males	Yes	No	Females	Yes	No
Contact or blood transfusion	15	8	7	61	30	31
From parents to off springs	15	1	14	61	4	57

Table 4: Questionnaire to Evaluate Opinions of People about the Method of Treatment of Disease

Possible Treatment	Males	Yes	No	Female	Yes	No
Medicines	15	15	-	61	53	8
Surgery	15	-	15	61	5	56
No need of treatment	15	-	15	61	12	49

RESULTS AND DISCUSSIONS

All the Results of the All Questionnaires are Summarized in a New Table

In this Table, the separate percentages of males and females corresponding to their questions have been given as well as total percentages of a particular answer have been arranged. For example, 98.68 % of total 76 participants said that it was a bacterial disease while 1.31 % denied this fact. In this table a comprehension of all the possible results has been presented.

Questionnaire based studies have been given great importance in current researches. UGTB is a chronic disease that affect urinary as well as genital system. It is caused by Mycobacterium tuberculosis which affects one third of humanity every year.

Table 5: Average Percentages of UGTB in Human Beings

Question	Male	Female	Male	Female	Total	Total
	Yes	No	Yes	No	Yes	No
1-UGTB is a viral disease	0 %	100 %	1.63 %	98.36 %	1.31 %	98.68 %
2-UGTB is a bacterial disease	100 %	0 %	98.36 %	1.63 %	98.68 %	1.31 %
3-UGTB is a fungal disease	20 %	80 %	4.91 %	95.08 %	7.9 %	92.01 %
4-UGTB is a genetic disease	0 %	100 %	16.4 %	83.60 %	13.16 %	86.84 %
5-UGTB is a metabolic disease	26.6 %	73.3 %	16.4 %	83.68 %	21.05 %	78.94 %
6-You suffered from UGBT	0 %	100 %	1.63 %	98.36 %	1.31 %	98.68 %
7-Your family member suffered from UGBT	13.3 %	86.6 %	8.2 %	91.8 %	10.52 %	89.47 %
8-Your relative suffered from UGBT	40 %	60 %	8.2 %	91.8 %	15.78 %	84.22 %
9-Your neighbor suffered from UGBT	13.3 %	86.6 %	3.27 %	96.72 %	5.26 %	94.73 %
10-Your friend suffered from UGBT	26.6 %	73.3 %	4.91 %	95.08 %	9.21 %	90.8 %

Table 5 Contd.,

11-Transmission of UGTB by physical contact or blood transfusion	53.35 %	46.6 %	49 %	50.81 %	50 %	50 %
12-UGTB can be transferred from parents to off springs	6.66 %	93.33 %	6.55 %	93.44 %	7.9 %	92 %
13- UGTB can be treated by medicines	100 %	0 %	86.68 %	13.11 %	89.47 %	10.52 %
14- UGTB require surgery	0 %	100 %	8.2 %	91.8 %	6.68 %	93.42 %
15- No need of treatment for UGTB	0 %	100 %	19.67 %	80.32 %	15.79 %	84.21 %

DISCUSSIONS

The objective of this study was to create awareness among people about UGTB. It is a widespread disease with many classes. By this study, we are able to develop a sense of awareness among masses about this disease.

UGTB is a disease that is rarely shown in early stages and is diagnosed after a long exposure to it. It is a bacterial disease. It is curable by using antibiotics as prescribed by your doctor as well as other methods of treatment may be applied according to the need. It often spreads in the blood and thus, can be transferred through blood transfusion as well as physical contact like sex with infected person. However, it is not characterized as STDs yet. It is easy to control in start stages and a little difficult to treat at lateral stages but is curable.



Figure 2

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REFERENCES

1. Qadir MI, Malik SA (2010) Comparison of alterations in red blood cell count and alterations in hemoglobin concentration in patients suffering from rectal carcinoma undergoing 5-fluorouracil and folic acid therapy. *Pharmacologyonline*, NI 3: 240-243.
2. Qadir MI, Noor A (2018) *Anemias. Rare & Uncommon Diseases*. Cambridge Scholars Publishing, Newcastle, England. ISBN: 978-1-5275-1807-0.
3. Qadir MI, Javid A (2018) Awareness about Crohn's Disease in biotechnology students. *GloAdv Res J Med Medical Sci*, 7(3): 062-064.
4. Qadir MI, Saleem A (2018) Awareness about ischemic heart disease in university biotechnology students. *GloAdv Res J Med Medical Sci*, 7(3): 059-061.
5. Qadir MI, Ishfaq S (2018) Awareness about hypertension in biology students. *Int J Mod Pharma Res*, 7(2): 08-10.
6. Qadir MI, Mehwish (2018) Awareness about psoriasis disease. *Int J Mod Pharma Res*, 7(2): 17-18.
7. Qadir MI, Shahzad R (2018) Awareness about obesity in postgraduate students of biotechnology. *Int J Mod Pharma Res*, 7(2): 14-16.
8. Qadir MI, Rizvi M (2018) Awareness about thalassemia in post graduate students. *MOJ Lymphology&Phlebology*, 2(1): 14-16.
9. Qadir MI, Ghalia BA (2018) Awareness survey about colorectal cancer in students of M. Phil Biotechnology at BahauddinZakariya University, Multan, Pakistan. *Nov Appro in Can Study*, 1(3): NACS.000514.2018.
10. Qadir MI, Saba G (2018) Awareness about intestinal cancer in university student. *Nov Appro in Can Study*, 1(3): NACS.000515.2018.