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Study of Current Practice of General Practitioner about Sexually Transmitted Diseases: A Case Study of District Bahawalpur

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ABSTRACT:

It is very distressing that no base line study have been done in Bahawalpur to have knowledge about the current practices of general practitioners about the STI case management. Therefore it is very pertinent to study the practices of general medical practitioners about this ice berg phenomenon regarding STIs. The main purpose of this study is to help in identifying areas which requires further intervention, need of any training of general practitioners, and planning strategies for prevention, control and improvement in the management of STIs. The main domain of study is to see the current practices of general practitioners including quacks as single group regarding the STI case management from urban and rural areas of Bahawalpur district. A sample size of 75 general medical practitioners of will be interviewed by using a questionnaire. The results show that the practices of private medical practitioners regarding the sexually transmitted infections are not satisfactory in the area of District Bahawalpur. There should be continuous education programs (CME) for medical practitioners in private practice on regular basis.

Key Words:

Sexually Transmitted Diseases, STD, AIDS, General Practitioner

INTRODUCTION

Sexually transmitted diseases (STDs) are a diverse group of infections, caused by biologically dissimilar microbial agents which are grouped together because of certain common clinical and epidemiological features. The infectious agents for these diseases are transmitted most commonly and most efficiently by sexual contact, and for which sexual transmission is epidemiologically important. The infectious agents of these diseases may be bacterial, viral, protozoal or fungal (Park, 2005). The infectious agents of these diseases are fairly inactivated when exposed to a harsh environment, and thus they are particularly suited to transmission by contact with mucus membrane during sexual contact. All these sexually transmitted diseases or infections are historically, biologically, behaviorally, economically and programmatically interrelated (Holms, et al., 1998).

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In some cases such as gonorrhea and genital herpes simplex virus infection, sexual transmission is the only route of transmission at least in adults, but in certain others STIs such as the hepatitis, giardiasis, shigalosis and amebiasis there are other important nonsexual means of acquiring infections like contaminated blood transfusion in hepatitis, and contaminated food and water in other infections (Loloyd et al. 1999).

These are the diseases that were known as venereal diseases in ancient times but during the past two decades, Sexually Transmitted Diseases (STDs) have undergone a dramatic transformation not only in the name, venereal diseases to sexually transmitted infections but also inclusion of many more names of pathogenic organisms in the list of STIs (Park, 2005).

Reliable data on worldwide incidence of STIs are not available. The World Health Organization (WHO) estimates that at least 333 million new cases of STIs other than HIV occurred in 1995, but in most of the countries STIs are under reported and so actual picture is not prominent.

In the report of WHO published in 1999, the estimated curable STIs among age group of 15-49 years were 340 million all over the world, while 700,000 people are added each year with an increase of 4% every year. In Pakistan the picture of STIs and HIV is very alarming, the true picture of STIs is not available but the cases of HIV/AIDS registered all over the Pakistan are 2612, in which 2308 are HIV positive cases, while 304 are registered AIDS cases. In Punjab total reported cases of HIV at the end of 2004 were 494 while only in federal capital Islamabad 464 cases of HIV were registered during same period. In Pakistan estimated number of children living with HIV/AIDS was 1800 in 1997 and 5000 children under the age of 15 years have lost their parents to AIDS.

According to Warszawski and Spira (1996), the consequences of STIs can be devastating e.g. infected infant with blindness, pneumonia, ectopic pregnancy, infertility. Syphilis can not only kill the infants but kill adults also. Enhanced risk of HIV transmission associated with STDs and emergence of multi-drug resistance as a public health issue has led to an even more urgent reappraisal of current STD control. Adequate management of STD is one of the cornerstone of STD control, as it prevents the development of complications, decreases the spread of STDs in the community offers a unique opportunity for targeted population about HIV prevention.

Parveen, K. and Clark, M. (1999), stated in their book that the control of STIs is a public health priority and the prevention of STIs through health promotion and education has become increasingly important as a control measure. Hence there was need to conduct the study to highlight importance of STIs management specially in private sector, and to contribute the baseline information from private sector to public sector for an effective control program. Because increasing incidence of STIs can prove to be

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very costly to individuals and health care system as they may reduce the productivity of men and women in the prime of their life.

According to National AIDS Control Program, Pakistan, practices regarding the management of STIs in private sector especially the practices of general medical practitioners about the management of such a diverse group of infections and their related syndromes are not known. Even up till now very few studies have been conducted in this record.

It is very distressing that no base line study have been done in Bahawalpur to have knowledge about the current practices of general practitioners about the STI case management. Therefore it is very pertinent to study the practices of general medical practitioners about this ice berg phenomenon regarding STIs. The main purpose of this study is to help in identifying areas which requires further intervention, need of any training of general practitioners, and planning strategies for prevention, control and improvement in the management of STIs.

Since the first Acquired Immunodeficiency Syndrome (AIDS) case was reported in 1981, human immunodeficiency virus (HIV) has caused approximately 22 million deaths worldwide. In United States approximately 4,000,000 persons have died and approximately 900,000 have been infected currently. By the end of 2003 an estimated 39.3 million people were living with HIV/AIDS. Among the people living with HIV, 95% of the total lives in developing countries. As a blood born and sexually transmitted infection, HIV has variable patterns of transmission and has affected persons such as commercial sex workers, injection drugs users, man who has sex with man (MSM) and person living in poverty (Celantano, D. et al., 1998).

Loloyd et al. (1999), reported that Trachomonas Vaginalis is potentially important sexually transmitted urogenital pathogen. Primarily by sexual intercourse, this organism causes vaginitis in women and non gonococcal urethritis in men. More than 200 million people worldwide are infected with this parasite annually. Multiple infections are frequent in patients with STIs. In venereal disease clinics about 20% of men with gonorrhea also have urethral chlamydial infection, and 30-50% of women with gonorrhea also have cervical chlamydial infection. In women with vaginitis, one study showed that 16% of cases were caused by mixed infections with various combinations of candida, trichomonas and gardnella vaginitis. However there is no convincing evidence that one sexually transmitted infection directly increases the risk of acquiring others. Rather the frequent coexistence of multiple sexually acquiring infections probably reflects the frequency of these organisms and the multiplicity of sexual partners among patients.

MATERIAL AND METHODS

It is a cross sectional, descriptive, epidemiological study to access the current practices about the management of STIs

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among general medical practitioners of District Bahawalpur. The main domain of study is to see the current practices of general practitioners including quacks as single group regarding the STI case management from urban and rural areas of Bahawalpur district.

The population of this area is about 33 lac and comprised of the people of all socioeconomic classes, from very poor people of katchi abadies (slums) to big industrialists residents. 70% of the population is working as farmers and 30% persons are laborer and businessmen. There is one tertiary care hospital i.e. Bahawal Victoria Hospital, one Civil Hospital, 04 Tehsil Head Quarter Hospitals, 2 TB clinics, 11 Rural Health Centers and 73 Basic Health Units. There are numerous private clinics and hospitals in the district.

A comprehensive list of all 180 general medical practitioners (GPs) working in District Bahawalpur is obtained from pharmaceutical companies. A sample size of 75 general medical practitioners of different age groups, both male and female including qualified and nonqualified /quacks practicing in allopathic system of medicine is obtained by using simple random number table after excluding the hakims and homeopaths.

A semi structured interview schedule with open and closed ended questionnaire is designed to gather the required information. The data collected on the questionnaire is entered in EPI Info Computer Software (WHO recommended statistical software for public health physicians for analysis.

RESULTS AND DISCUSSION

TABLE – 1
GENDER DISTRIBUTION OF PRIVATE MEDICAL PRACTITIONERS

Gender distribution	*Frequency*	*Percent*
Males	55	73.3%
Female	20	26.7%
Total	75	100.0%

Among all 75 private medical practitioners 55 (73.3%) were male physicians while 20 (26.7%) were female physicians.

TABLE – 2
DISTRIBUTION OF MEDIAL PRACTITIONERS WITH REFERENCE TO TRAINING RECEIVED FOR STIs CASE MANAGEMENT

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Training of STIs	*Frequency*	*Percent*
Received training	6	8.0%
Never received training	69	92.0%
Total	75	100.0%

Out of 75 physicians interviewed 6 (8%) physicians had got the training to manage the cases of STIs while 69 (92.0%) physicians had never received any training regarding the STI management.

TABLE – 3
NAMES OF COMMON STIs AS MENTIONED BY PRIVATE MEDICAL PRACTITIONERS

STI Cases	*Frequency*	*Percent*
Gonorrhoea	68	90.7%
Syphilis	71	94.7%
Trichomoniasis	49	65.3%
Candidiasis	61	81.3%
AIDS	65	86.7%
Hepatitis B & C	23	30.7%
Trachoma	34	45.3%
Venereal Warts	26	34.7%
Scabies	18	24.0%

68 (90.7%) physicians were aware of gonorrhea as one of STIs, syphilis was known by 71 (94.7%) physicians while the name trichomoniasis was known to 49 (65.3%) physician, candidiasis as one of STI, was stated by 61 (81.3%) physicians and 18 out of 75 (24.0%) told that scabies is also STI. 65 (86.1%) physicians were aware of HIV/AIDS as STI, 23 (30.7%) physicians told that hepatitis B and C are STIs also.

TABLE – 4
DISTRIBUTION OF PRIVATE MEDICAL PRACTITIONERS ACCORDING TO ATTENDING STI CASES IN PRIVATE PRACTICE

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STI cases	*Frequency*	*Percent*
Attend STI cases	75	100.0%
Do not attend STI cases	0	0.0%
Total	75	100.0%

According to the interview based assessment all the 75 (100%) told that they were attending the STI cases.

TABLE – 1
CHARACTERISTICS OF PATIENTS PRESENTING WITH STIs

STI Patient Characteristics	*Frequency*	*Percent*
Gender of patients		
Male	51	68.0%
Female	24	32.0%
Age group of the patients		
20-40 years	55	73.3%
40-60 years	20	26.7%
Marital status of the patients		
Married	37	49.3%
Unmarried	38	50.6%
Opinion of private practitioners about STI patients regarding sexual partners other than spouse		
Yes	37	49.3%
No	21	28.0%
Do not know	17	22.7%

According to above table, ratio of STI in males and females are 51 (68.0%) and (32.0%) respectively. 55 (73.3%) physicians were of the view that majority of patients of STI attending their clinics were less than 40 years of age, while 25 (33.33%) physicians told that majority of their STI patients were of 40 years or above. 38 (50.06%) physicians told that majority of STI patients coming to their clinics were unmarried while

37 (49.3%) medical practitioners said that majority of the STI patients coming to their clinics were married. All the 37 (49.3%) physicians who were of the view that majority of STI patients coming to their clinics were married told that majority of STI patients had sexual relations with persons other than their spouses.

TABLE – 2
SYMPTOMS ASKED BY STI PATIENTS BY PRIVATE MEDICAL PRACTITIONERS

Symptoms (Complaints told by patients)	*Frequency*	*Percent*
History		
History about onset of disease	67	89.3%
Itching on private area	68	90.7%
About discharge		
Discharge from urethra / vaginal	75	100.0%
Offensive / Non offensive	24	32.0%
Milk	41	54.7%
Purulent	52	69.3%
Curd like	58	77.3%
Green foul smelling	36	48.0%
Copious	21	28.0%
Thick	42	56.0%
Information about the genital area		
Scrotal swelling	2	2.7%
Lymph node enlargement	29	38.7%
Painful private area	23	30.7%
Painless private area	23	30.7%
Ulcer formation	60	80.0%
Gummatus lesion	48	64.0%
Chancre	37	49.3%
Single / multiple	8	10.7%
Lower abdominal pain	46	61.3%

Regarding the symptoms of STI, 67 (89.3%) physicians had the practice to get the proper history while 75 (100%) would have asked about the presence of abnormal vaginal/urethral discharge and 60 (80.0%) asked about the ulcers on the genital regions while only 8 (10.7%) physician told that they have the practice of asking about

presence of lesions, number of lesions and number of lymph nodes related to STI.

TABLE – 7
SIGNS LOOKED BY PRIVATE MEDICAL PRACTITIONER DURING EXAMINATION OF STI CASE

Signs (Found by Physicians)	*Frequency*	*Percent*
Discharge		
Vaginal	69	92.0%
Urethral	61	81.3%
Characteristics of discharge		
Milky white	54	72.0%
Purulent	55	73.3%
Greenish foul smelling	45	60.0%
Thick curd like	61	81.3%
Oedema	25	33.3%
Redness	63	84.0%
Excoriation	9	12.0%
Signs from genital area		
Ulcerating lesions	58	77.3%
Gummutus lesion	28	37.3%
Swelling of the Penis	5	6.7%

60 (92.0%) general physicians looked for discharges from vagina/urethra when examining the STI cases, 61 (81.3%) general practitioners looked for the characteristic of discharge, 58 (77.3%) physicians used to examine for ulcerating lesions, only 5 (6.7%) had the practice of examining the swelling of genital area.

TABLE – 8
AVAILABILITY OF LABORATORY FACILITY FOR STI CASES AT THE PRACTICE PLACE OF PRIVATE MEDICAL PRACTITIONERS

Lab Facility of STI	*Frequency*	*Percent*
Availability of lab. Facility		

Available	26	34.7%
Not Available	49	65.3%
Types of lab. Facility (n=26)		
FTA	2	7.7%
VDRL	17	65.4%
Dark field examination	23	88.5%
Microscopy of discharge	26	100.0%
RPR	2	7.7%

26 (34.7%) had the lab facilities in their place of practice. 26 (100%) physicians used to do microscopical examination of specimens taken from the patients presenting with STIs, while 2 (7.7%) physician told about the use of FTA investigation for diagnosis of STI cases. 17 (65.4%) physicians had investigated their clients of STI by using VDRL technique

TABLE – 9
TREATMENT OF STIs PATIENTS BY PRIVATE MEDICAL PRACTITIONERS

Treatment Regimen	*Syphilis*		*Gonorrhea*		*Trachomoniais*		*Candidiasis*	
	No.	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*
Correct	37	49.3%	54	72.0%	51	68.0%	63	84.0%
Partially correct	5	6.7%	12	16.0%	-	-	6	8.0%
Incorrect	20	26.7%	3	4.0%	6	8.0%	3	4.0%
Do not know	13	17.3%	6	8.0%	18	24.0%	3	4.0%
Total	75	100.0%	75	100.0%	75	100.0%	75	100.0%

Interview based assessment revealed that 37 (49.3%) physicians would have treated their patients of syphilis with correct treatment regimen while, 54 (72.0%) physicians among 75 would have treated gonorrhoea correctly. 18 (24%) were unaware of trichomoniasis candidiasis would have treated correctly by 63 (84%) physicians as shown in Table-9.

TABLE – 10

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HEALTH EDUCATION MESSAGES FOR STI PATIENTS AS MENTIONED BY PRIVATE MEDICAL PRACTITIONERS

Health Education	*Frequency*	*Percent*
Educational counseling	56	74.7
Promotion of condom used	56	74.7
Promotion of health care seeking behavior	27	36.0
Promotion of safer sexual behaviors	64	85.3
Compliance of the patients	62	82.7
Notification and treatment of patients	28	37.3

Health education messages were given by all 75 (100%) physicians as given in Table-10, the most frequent message by 64 (85.3%) physicians was about the promotion of safer sexual behavior, message about the compliance of patients was given by 62 (82.7%) physicians, 56 (74.7%) physicians gave the message to use condoms, others 28 (37.3%) physicians gave the message to recommend treat for their sexual partners and to notify them, while 27 (36%) physician delivered message about the promotion of health seeking behavior.

TABLE – 11
KNOWLEDGE UPDATING REGARDING STIs CASE MANAGEMENT BY PRIVATE MEDICAL PRACTITIONERS

(*Knowledge Updating*	*Frequency*	*Percent*
Knowledge updating regarding STIs		
Do knowledge updating	62	82.7%
Never do knowledge updating	13	17.3%
Methods of knowledge updating (n=62)		
Medical journals	37	59.7%
Internet	37	59.7%
Seminars	18	29.0%
Literature by pharmaceutical companies	26	41.9%
Medical books	8	12.9%
Workshops	1	1.6%

Regarding up gradation of knowledge about the management of cases of STIs 62 (82.7%) had the habit of upgrading of their knowledge about managing their clients of STIs. Among 62 physicians 37 (59.7%) had used medical journals for upgrading of their knowledge. 37 (59.7%) also had gained knowledge by internet services, while 18 (29.0%) used to attend the seminars for the purpose of upgrading the knowledge, 26 (41.9%) physicians had gotten up-to-date knowledge by pharmaceutical companies through their representatives, while only one (1.6%) physician had attended the workshop regarding STI management, the hobby of reading medical books for upgrading their knowledge had found in 8 (12.9%) general physicians.

TABLE – 12
KNOWLEDGE OF PRIVATE MEDICAL PRACTITIONERS REGARDING STI CASE MANAGEMENT GUIDELINES

Knowledge STI	*Frequency*	*Percent*
Knowledge regarding national STI case management guidelines	39	52.0%
Knowledge regarding WHO guidelines for STIs case management	24	32.0%
Knowledge regarding syndrome associated with STIs	40	53.3%
Knowledge regarding syndrome case management of STIs	39	52.0%

It was depicted that 39 (52.0%) out of 75 physicians had read the national guidelines of STD management while only 24 (32.0%) general physicians were aware of WHO guidelines about the management of STIs. 40 (53.3%) physician were told about the syndromes associated with STIs and 39 (52.0%) out of 75 medical practitioners were those who had knowledge regarding syndrome case management of STI according to WHO guidelines

TABLE – 13
RECORD KEEPING OF STIs CASES BY PRIVATE MEDICAL PRACTITIONERS

Record Keeping	*Frequency*	*Percent*

Keep record of STI cases	7	9.3%
Do not keep record	68	90.7%
Total	75	100.0%

On assessing the record keeping practices of physicians 7 (9.3%) used to do the practice of keeping the records of all of their patients, while rest of them 68 (90.7%) did not keep the records. None of them keep the record of STI cases separately

TABLE – 14
COMPARISON OF STIs CASE TREATMENT REGIMEN WITH REFERENCE TO TRAINING RECEIVED FOR STIs CASE MANAGEMENT

Training of STI case management	*(n)* *75*	*STIs treatment regimen*				*Statistical Test*
		Correct regimen		*Incorrect regimen*		
		No.	*%*	*No.*	*%*	
Treatment of Syphilis						
Training Received		5		1		
Row %	6	83.3		16.7		
Col %		13.5		2.6		Fisher exact test
Not received		32		37		p-value = 0.09
Row %	69	46.4		53.6		
Col %		86.5		97.4		
Treatment of Gonorrhoea						
Training Received		6		0		
Row %	6	100.0		0.0		
Col %		11.1		0.0		Fisher exact test
Not received		48		21		p-value = 0.13
Row %	69	69.6		30.4		
Col %		88.9		100.0		
Treatment of Trichomoniasis						
Training Received		6		0		
Row %	6	100.0		0.0		
Col %		11.8		0.0		Fisher exact test
Not received		45		24		p-value = 0.08
Row %	69	65.2		34.8		
Col %		88.2		100.0		

Treatment of Candidiasis				
Training Received		6	0	
Row %	6	100.0	0.0	
Col %		9.5	0.0	Fisher exact test
Not received		57	12	p-value = 0.33
Row %	69	82.6	17.4	
Col %		90.5	100.0	

Researchers observed regarding the effect of training upon the treatment practices of physicians, 5 (83.3%) physicians who had received the training about the management of sexually transmitted infections would have correctly treated the cases of syphilis as compared to 32 (46.4%) physicians who had never received any type of training, would have treated syphilis correctly, however the difference was statistically not significant (P=0.09).

Regarding treatment practices about gonorrhea, 6 (100%) physicians who got the training about the management of STI would have given correct treatment of gonorrhea as compared to 48 (69.6%) physician who had never received any training, would have treated gonorrhea correctly, however the difference was statistically not significant (P=0.13).

Researcher's observation regarding the effect of training upon the treatment practices of trichomoniasis, 6 (100%) physicians who had received training about the management of STIs would have correctly treated the cases of trichomoniasis as compared to 45 (65.2%) physicians who had never received any type of training, would have treated trichomoniasis correctly, however the difference was statistically not significant (P=0.08).

Interview based assessment showed that 6 (100%) physicians who had received training about the management of STIs would have correctly treated the cases of vaginal candidiasis as compared to 57 (82.6%) physicians who had never received any type of training, would have treated vaginal candidiasis correctly, however the difference was statistically not significant (P=0.33).

TABLE – 15
COMPARISON OF STIs CASE TREATMENT REGIMEN WITH REFERENCE TO KNOWLEDGE UPDATING FOR STIs CASE MANAGEMENT

Knowledge updating	*(n) 75*	*STIs treatment regimen*	*Statistical Test*

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		Correct regimen		*Incorrect regimen*		
		No.	*%*	*No.*	*%*	
Treatment of Syphilis						
Knowledge updating Row		37		25		
%	62	59.7		40.3		
Col %		100.0		65.8		Chi-Sq = 15.31
No knowledge updating		0		13		p-value < 0.01
Row %	13	0.0		100.0		
Col %		0.0		34.2		
Treatment of Gonorrhoea						
Knowledge updating Row		51		11		
%	62	82.3		17.7		
Col %		94.4		52.4		Fisher exact test
No knowledge updating		3		10		p-value < 0.01
Row %	13	23.1		76.9		
Col %		5.6		47.6		
Treatment of Trichomoniasis						
Knowledge updating Row		51		11		
%	62	82.3		17.7		
Col %		94.4		52.4		Fisher exact test
No knowledge updating		0		13		p-value < 0.01
Row %	13	0.0		100.0		
Col %		0.0		54.2		
Treatment of Candidiasis						
Knowledge updating Row		58		4		
%	62	93.5		6.5		
Col %		92.1		33.3		Fisher exact test
No knowledge updating		5		8		p-value < 0.01
Row %	13	38.5		61.5		
Col %		7.9		66.7		

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According to the interview based assessment of treatment practices of sexually transmitted infections, 37 (59.7%) practitioners out of 62 who upgraded their knowledge about the management of STIs, would have correctly treated the cases of syphilis as compared to 13 (100%) medical practitioners who did not upgraded the knowledge. The difference was statistically significant P.Value<0.01.

51 (94.4%) medical practitioners who studied the medical literature for upgrading their knowledge about the management of STIs would have treated gonorrhea correctly as compared to 3 (5.6%) medical practitioners who did not upgraded their knowledge treated the gonorrhea correctly also. But the difference was statistically significant P<0.01.

51 (82.3%) private medical practitioners who upgraded their knowledge would have treated trichomoniasis correctly, as compared to 13 (100%) medical practitioners who did not upgraded their knowledge about the management of STIs and the difference was statistically significant also (P. Value <0.01).

58 (92.1%) medical practitioners who upgraded their knowledge regarding the management of STIs would have treated correctly the cases of candidiasis as compared to 5 (67.9%) medical practitioners who did not upgraded their knowledge. The difference was statistically significant P. Value <0.01.

TABLE – 16
COMPARISON OF KNOWLEDGE ABOUT THE STIs CASE MANAGEMENT GUIDELINES WITH STIs CASE MANAGEMENT

National Guidelines of STI Management	*(n)*	*STIs treatment regimen*				*Statistical Test*
		Correct regimen		*Incorrect regimen*		
		No.	*%*	*No.*	*%*	
Treatment of Syphilis						
Have knowledge		31		8		
Row %	39	79.5		20.5		
Col %		83.8		21.1		Chi-Square = 29.5
No knowledge		6		30		p-value < 0.01
Row %	36	16.7		83.3		
Col %		16.2		78.9		
Treatment of Gonorrhoea						
Have knowledge		38		1		
Row %	39	97.4		2.6		
Col %		70.4		4.8		Chi-Square = 29.07
No knowledge		16		20		p-value < 0.01
Row %	36	44.4		55.6		
Col %		29.6		95.2		
Treatment of Trichomoniasis						
Have knowledge		35		4		
Row %	39	89.7		10.3		
Col %		68.6		16.7		Chi-Square = 17.65
No knowledge		16		20		p-value < 0.01
Row %	36	44.4		55.6		
Col %		31.4		83.3		
Treatment of Candidiasis						
Have knowledge		39		0		
Row %	39	100.0		0.0		
Col %		61.9		0.0		Chi-Square = 15.47
No knowledge		24		12		p-value < 0.01
Row %	36	66.7		33.3		
Col %		38.1		100.0		

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Regarding the knowledge of national guidelines regarding the STI management it was observed 31 (83.8%) physician would have treated their clients of syphilis with correct treatment regimen as compared to 6 (16.2%) who had no knowledge of national guidelines and the difference is statistically significant P value <0.01.

31 (97.4%) general practitioners who had knowledge of national guideline regarding STI management would have given correct treatment to cases of gonorrhea as compared to 16 (29.6%) who were unaware of that guidelines which was statistically significant.

Correct treatment of trichomoniasis would have been given by 35 (89.7%) general practitioners who had the knowledge of national guidelines as compared to 16 (44.4%) who were not aware of the national guideline and result was statistically significant P<0.01.

CONCLUSIONS

As evident from the results of study, the practices of private medical practitioners regarding the sexually transmitted infections are not satisfactory in the area of District Bahawalpur. Although there is a long list of about 20 different sexually transmitted infections has published by WHO but the majority of physicians were only familiar of the most common names of prevalent sexually transmitted infections like syphilis, gonorrhea, trichomoniasis, candidiasis. Only seven physicians had limited knowledge other than those common STIs. Very few knew that hepatitis and scabies are also STIs. Reason of poor knowledge of physicians about STIs may be due to not studying the medical journals, latest medical books or the use of latest media – the internet services, after indulging in the practices to keep their knowledge update. Only the source of upgrading the knowledge about the management of STIs among non qualified physicians was the knowledge provided by the representatives of pharmaceutical companies and their peer groups.

Another issue could be non-availability of lab tests and the practicing patterns of physicians not to use labs for proper diagnosis is evident as (65.3%) of physicians have not labs in their clinics even those (34.7%) physicians who have lab facilities in their clinics had not proper arrangement for doing the advanced tests and their kits for proper diagnosis of STIs. Similarly more than 92% of physicians have not attended any type of training about the STI management. So the impact of these mentioned factors emerging out from the study needs urgent rectification.

Health education is very important in the treatment of STIs, the spread of STIs can be controlled by proper education of STI patients by advocating them of using the techniques of health education.

Regarding the record keeping practices majority of physicians have not record keeping system in their clinics because they attend all the patients of STIs as routine cases and no record keeping practices they used as for general patients also leads to the same habit for STI cases, which is not a

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good practice to prevent the STI from country, but study showed that those general practitioners who had been keeping the record of their patients were treating their patients correctly as compared to those who had not that system of record keeping, may be due to the fact that it gives a reference list of previously treated cases with proved successful regimen for management of STIs and also helps them to intervene or switch over to new strategies for management of STIs.

STIs are those hidden infections which are growing day by day in some communities all over the world without knowing by most of their victims and their consultants. Only a small tip of that big iceberg is evident but a big part of that iceberg is not in picture due to poor documentation as noted by the study conducted in District Bahawalpur, and the morbidity is increasing due to poor management. In spite of the presence of national and WHO guidelines for the management of STI and related syndromes and these have been disseminated to all over the Pakistan also, the impact of these guidelines is still not obvious as far as the management of STIs concerned, due to some established facts, like lack of refresher courses and training workshops for general medical practitioners, and ineffective dissemination of these guidelines at grass root level.

In the light of the study findings conducted in the private medical practitioners, practicing in District Bahawalpur following recommendations will help in the improvement of their current practices about the STIs.

There should be continuous education programs (CME) for medical practitioners in private practice on regular basis, and for each such program some credit points should be given to participant and on achieving the targeted points they should be awarded some certificate or diploma as incentive. There should be a documented setup of liaison with teaching hospitals for upgrading of latest knowledge and achievements.

To upgrade the knowledge and to improve the practice regarding STIs particularly emphasizing on:

- Improved clinical diagnosis.
- Utilization of lab facilities.
- Standardized treatment according to national and WHO guidelines.
- Appropriate health education messages.
- Need of referral for management of complicated cases.
- Non-qualified physicians should not be allowed to practice, if not possible, they should be given proper training on regular basis.
- Every physician should encourage for record keeping of their patients, so that the burden of diseases can be estimated.

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- Government and other agencies, NGOs should spend time and money for workshops regarding the STIs, and should assist in record keeping and in lab investigation for proper diagnosis.

- All the general practitioners should be actively involved regarding the management of STIs.

There is dire need to prepare health education material in simple language to be disseminated among the different communities so that they can understand their problems and can be able to protect themselves more properly. Some supervisory and evaluation system should be implemented for the management of STIs in private practice. There is also a need of revolutionary changes in medical curriculum and the national & WHO guidelines of management of STIs should be included.

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