

Management of sexually transmitted infections (STI)-associated syndromes by part-time general practitioners (GP) in Puttalam district.

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Abstract

Introduction: Puttalam district shows higher rate of HIV. Considering the interaction between HIV and STI, management of STI-associated syndromes by GPs was studied. The objective of the study was to describe the management of STI-associated syndromes by GPs in Puttalam district.

Method: A descriptive cross-sectional study was done in Puttalam district from 1st February to 30th April 2016 among 114 randomly selected part-time GPs using a self-administered questionnaire. Management of five STI syndromes was compared with national guidelines.

Results: Vaginal discharge and lower abdominal pain syndromes were encountered by majority (97%) of GPs. However, vaginal discharge was considered as the syndrome with the highest possibility of an STI by majority (93%) of GPs. Urine full report (94.9%) and VDRL (77.5%) were the commonest investigations ordered by GPs. Only 4.3% of patients with urethral discharge, 4.3% of patients with vaginal discharge, 15 % of patients with genital ulcers, 10.5% of patients with scrotal swelling and 1.7% of patients with genital warts were managed according to the national guidelines. Notably none of the patients with lower abdominal pain syndromes were managed according to the guideline. Management of partners of patients with STI syndromes were done by 50.9% of GPs. Majority of GPs (87%) educated patients on STI prevention. Most of the referrals were to the local STI clinic (74.6%) and most of these referrals were patients with genital warts (89.5%).

Conclusions: Large number of GPs is managing patients with STI syndromes. However, standard management of STI syndromes is done by only small number of GPs. Therefore, more educational and training programs on STI management for GPs are recommended.

Key words: STIs, Sexually Transmitted infections, GPs, General practitioners

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Full article

Introduction

Sexually Transmitted Diseases (STD) that are reported to the National STD/AIDS Control Programme are on the rise. According to the annual report of the National STD/AIDS Control Program (NSACP), there have been 19,530 and 22,059 new patients registered in STD clinics in Sri Lanka in 2013 and 2014 respectively. Most common STDs in 2014 in Sri Lanka were Genital herpes, Non Gonococcal Urethritis, Genital Warts, Syphilis, Gonorrhoea and Trichomoniasis in descending order of prevalence.

STIs are mostly transmitted via unprotected sexual intercourse but there can be other ways of transmission as well. e.g.: via contaminated needles/ sharp instruments, blood and blood products and mother to child. Unprotected receptive anal sex is the most risky sexual practice but the disease can be transmitted in vaginal or oral sex as well. There are several factors that contribute to transmission of STIs. Among them social factors like lack of knowledge and lack of access to affordable protective mechanisms, cultural and religious reasons, inability to negotiate with the partner for safe sex: biological factors like younger age, female gender, behavioural factors like multiple partners, regular changing of partners, injectable drug use are common contributors. Having one STI makes a person vulnerable to acquire more STIs because the genitalia becomes inflamed and opens up a pathway for infections. Women are at a higher risk than men as their area of genital exposure is larger than men and they usually start sexual life earlier than men.

Main symptoms in STDs are genital, peri-anal or oral blisters and/or ulcers, discharge from urethra and/or vagina, warts in genitalia or peri-anal region, pain and swelling of testis and lower abdominal pain. But it has been found that most of the patients with STIs are asymptomatic. (70% of women and 50% of

men with Chlamydia and 80% of women and 10% of men with gonorrhoea are asymptomatic)⁵

Most of these STDs are curable, provided the patients are treated with the appropriate antibiotic or antiviral with the correct dose for recommended duration. If not, they may be partially treated and may transmit the disease to their sexual contacts and may become resistant for commonly used antibiotics as well.

It is very important to treat the partners in STIs because if the partner is not treated, the patient will acquire the infection again from the partner in a short time. And it is very important to educate them regarding the protective mechanisms and provide them the necessary psychological and social support. It is also important to follow up them regularly and screen them for other STIs as well. Safe sexual practices are the best methods for prevention. Delaying sexual debut, monogamous partnership, correct and consistent use of condoms and changing from high risk penetrative sex to low risk non-penetrative sex are among them.

In Sri Lanka, NSACP is the place where prevention and treatment programs for STIs are being implemented and monitored. There is one central STD clinic in Colombo as well as there are 30 peripheral STD clinics and 23 branch clinics scattered in Sri Lanka to control and treat STIs.

According to the publication of World Health Organization in 2007, management of Sexually Transmitted Diseases should not be exclusively done at STI clinics.⁶ They can be managed by first contact medical officers according to the guidelines for syndromic approach for STI management. NSACP has published guidelines for syndromic approach for STD case management in 2001.⁷ It includes treatment for current episode, health education on STIs, counselling on safe sexual practices, partner notification and treatment,

condom promotion and follow up or referral to an STI clinic.

Justification:

Puttalam district is situated in North Western province in Sri Lanka. STD clinic, Chilaw is the main clinic that manages patients with STDs in the Puttalam district.

There have been 664 new patients registered in the STD clinics in 2013, of which 363 patients were diagnosed of having one or more STDs and 779 new patients were registered in 2014, of which 406 patients were diagnosed of having one or more STDs.^{8,9}

Total newly registered patients moved up from 11th position in 2013 to 6th position in 2014 in the country in comparison with other districts.⁸

The most prevalent presentations to the STD clinic, Puttalam in 2014 were Non Gonococcal Urethritis, Vaginal Candidiasis, Bacterial Vaginosis, Genital Herpes and Syphilis.⁹

It also showed a significant number of HIV patients in Puttalam district in 2014 with 2.3/100,000 population which became the 3rd highest prevalence within a district in the country.⁹

Considering these facts and that inadequate management of STDs can lead to increase in transmission of HIV. Therefore, it was decided to carry out a study on syndromic management of STDs by part time general practitioners in Puttalam district.

Objectives:

To study the management of STI-associated syndromes by part time general practitioners in the district of Puttalam.

Methods

Descriptive cross sectional study was carried out among part-time GPs practising in the

district of Puttalam which is located in the North-Western part of the country. It has 48 government western medicine institutes, including: one District General Hospital (DGH), two Base Hospitals (BH), 12 District Hospitals (DH), 33 Preliminary Care Health Units (PMCU) and 16 Medical Officer of Health areas (MOH). There were 386 Doctors working in these health care institutes when the study was carried out.

Doctors who were working in the government hospitals and practising as part-time GPs were considered as the population and there were 203 GPs in the sampling frame. Doctors who were on leave during the study period, specialists in medical profession, and doctors practicing other than western medicine were excluded from the population.

Simple random sampling (SRS) technique was used to select study units from the sampling frame of 203 GPs. Sample size was calculated using 95% confidence level, assumed proportion as 50% (0.5) and acceptable error as 10% (0.1). Calculated sample size was 96 and a 25% of non-response rate was then added and required sample size came as 120.

Structured self administered questionnaire was used as the data collection tool. Questionnaire was pre-tested among a group of part-time GPs outside Puttalam district and necessary adjustments were made to the final questionnaire.

Data collection was completed during 1st February 2016 to 30th April 2016 by the principal investigator.

Ethical clearance was obtained by Ethics Review Committee, Faculty of Medicine, University of Kelaniya (letter number: FWA 00013225)

Data analysis was done using SPSS version 13 and results were compared with the syndromic management guidelines published by NSACP in 2001.

GPs practices on five different STI-associated syndromes (namely urethral discharge, vaginal discharge, genital ulcers, scrotal swelling, pain and tenderness in lower abdomen and genital growths) were observed.

Results

The study data collection was carried out among 114 randomly selected sample of GPs (response rate 95%)

Background characteristics

Distribution of basic characteristics of the sample is mentioned in the table 1.

Table 1: Sample characteristics of GPs

Characteristic		Number	Percent
Gender	Male	78	68%
	female	36	32%
	Total	114	100%
Place of work	GH	24	21%
	BH	45	40%
	DH	27	24%
	PMCU	8	7%
	MOH	10	9%
	Total	114	100%
Experience as a GP	<1year	17	15%
	1-2years	29	25%
	2-5years	16	14%
	>5years	52	46%
	Total	114	100%

DGH-General Hospital, BH-Base Hospitals, DH-District Hospitals, PMCU-Preliminary Medical Care Units, MOH-Medical Officer of Health.

Experience of STI-associated syndromes

Majority of the GPs have seen patients with STI syndromes. Vaginal discharge is the mostly seen STI syndrome and genital growth (genital warts) is the least seen STI syndrome. Majority suspects an STI as a possible cause of the symptom. Considering a possibility of an STI is highest with the symptom vaginal discharge [n=107(93.8%)] and lowest with scrotal swelling [n=53(46.5%)]. Most important thing is that some GPs are not

considering STIs as a cause for those STI-syndromes.

Table 2: Percentage of GPs who have seen an STI-associated syndrome and who thought an STI as a cause of the syndrome (n=114)

STI-associated syndromes	Percent of GPs seen STI-syndromes (n=114)	Percent of GPs suspected an STI as a cause (n=GPs who have seen the symptom)
Vaginal discharge	97%	94%
Lower abdominal pain	97%	93%
Scrotal swelling	90%	89%
Genital ulcers	78%	87%
Urethral discharge	76%	56%
Genital growths	60%	46%

Percentages are not mutually exclusive

Investigations ordered by GPs for STI-associated syndromes

Investigations have been performed by 102/114 GPs. Common investigations ordered by GPs for STI-associated syndromes in the private practice are tabulated in table 3. UFR was the mostly ordered investigation by GPs.

Table 3: Investigations performed on patients with given STI syndromes by GPs

Category	Number	Percent
None	12	11%
UFR	93	95%
VDRL	76	78%
Genital swabs	29	30%
FBC	9	9%
ESR	3	3%
Pap smear	1	1%
HIV antibodies	1	1%
Hep B serology	1	1%

Percentages and numbers are not mutually exclusive

Use of antibiotics for STI-associated syndromes by GPs

Most of the GPs would use antibiotics for management of STI syndromes. Antibiotics use by STI-syndrome are tabulated in table 4.

They used antibiotics mostly on vaginal discharge and least on genital growths.

Table 4: Percentage of GPs who use antibiotics for different STI-syndromes (n=114)

STI-associated syndromes	Number	Percent
Vaginal discharge	110	96.5%
Lower abdominal pain	82	83.3%
Scrotal swelling	74	76.3%
Genital ulcers	71	65.8%
Urethral discharge	92	81.6%
Genital growths	14	17.5

Percentages and numbers are not mutually exclusive

Common antibiotics used by GPs for different STI-syndromes are tabulated in the table 5 with dose and frequency. It is interesting to notice that some of them have used antibiotics for genital growths whereas 3 GPs (2.6%) have used trichloroacetic acid (TCA) for treatment.

Table 5: Use of antibiotics by the STI-syndrome

Symptom	Mostly used antibiotic	Percent.
Vaginal discharge (n=110)	Metronidazole 400mg tds, PO	36%
Urethral discharge (n=92)	Ciprofloxacin 500mg bd, PO	46%
Lower abd. pain (n=82)	Ciprofloxacin 500mg bd, PO	48%
Scrotal swelling (n=74)	Ciprofloxacin 500mg bd, PO	39%
Genital ulcers (n=71)	Acyclovir 400mg tds, PO	31%
Genital growths (n=14)	Acyclovir 400mg tds, PO	50%

Percentages and numbers are not mutually exclusive

Management of partners of patients with STI-associated syndromes

Managing partners of patients with STI-syndromes was done by 50.9% (n=58) of GPs

and 30 (52.8%) out of them are managing asymptomatic partners as well.

Performing investigations on partners was done by 52 GPs (45.6%) and the most commonly used investigation was UFR, as it was with the patients. (Table 6)

Table 6: investigations performed on partners by GPs

Category	Number	Percent
UFR	42	72
VDRL	42	72
Genital swab	16	27
HIV screening	03	05
Hep B serology	1	02

Percentages and numbers are not mutually exclusive

Use of antibiotics on partners of patients with STI-syndromes was done by 33 (28.9%) GPs and they were mostly similar to the antibiotics used with patients. (Table 7)

Table 7: Most common antibiotics used on partners

Symptom of the patient	Mostly used antibiotic	Percent. of GPs out of whom used antibiotics
Vaginal discharge (n=9)	Metronidazole 400mg tds, PO	27%
Urethral discharge (n=6)	Ciprofloxacin 500mg bd, PO	18%
Lower abdominal pain (n=9)	Ciprofloxacin 500mg bd, PO	27%
Scrotal swelling (n=5)	Ciprofloxacin 500mg bd, PO	15%
Genital ulcers (n=7)	Acyclovir 400mg tds, PO	21%
Genital growths (n=3)	Acyclovir 400mg tds, PO	9%

Percentages and numbers are not mutually exclusive

Health education sessions carried out by GPs for patients with STI-associated syndromes

Health education is a part of complete management of STI patients and it was done

by 99 GPs (87%). Out of that, 73.7% of them advised to stick to a single partner, 71.1% advised on correct and consistent use of condoms and 77.2% advised on importance in follow up.

Referral decisions taken by GPs for STI-associated syndromes

GPs mostly referred patients with genital growths (90%). Patients with lower abdominal pain were the least referred syndrome (54%). (Table 8)

Table 8: referring of patients with STI-associated syndromes for management

STI-associated syndromes	Number of GPs who referred patients	Percent of GPs who referred patients
Genital growths	102	90%
Genital ulcers	92	81%
Vaginal discharge	74	65%
Urethral discharge	72	63%
Scrotal swelling	68	60%
Lower abd. pain	62	54%

Percentages are not mutually exclusive

They mostly referred patients with STI syndromes to the local STD clinic for further follow up, and they also referred patients to other specialities as well. (Table 9)

Table 9: place of referral

Place of referral	Number of GPs who referred patients	Percent of GPs who referred patients
Local STD clinic	86	75%
Gynaecology clinic	83	73%
Dermatology clinic	55	48%
Consultant Venereologist	24	21%
Surgical clinic	24	21%

Percentages are not mutually exclusive

Comparison of current management practice with the standard management for STI-associated syndromes by GPs

GPs current practice of management was compared with the national guidelines on the management of STI-associated syndromes. Majority of GPs are not following standard treatment guidelines. However, it seems that acceptable number of GPs educate patients (87%), promote condoms (71%) and discuss about partner management (51%). (Table 10)

Table 10: GPs practicing expected management

Management component	Percent of GPs practising expected treatment
Use of correct treatment	87%
Genital ulcers	16%
Scrotal swelling	10.5%
Urethral discharge	4.4%
Vaginal discharge	4.4%
Genital growths	2.6%
Lower abd. pain	0.0%
Health education to patients	87%
Condom promotion	71%
Partner management	51%

Discussion

Most of the GPs participated in the research were having experience of more than 5 years as a GP and have seen patients with STI-associated syndromes in GP practice. Vaginal discharge is the mostly seen STI syndrome and genital growth (genital warts) is the least seen STI syndrome. Their suspicion on possibility of a patient having an STI with presenting symptoms is highest with the vaginal discharge [n=107(93.8%)] and lowest with scrotal swelling [n=53(46.5%)]. They mostly used UFR as the investigation on patients with STI syndromes. Antibiotic use was for patients with STI syndromes were highest with vaginal discharge and lowest with genital growths whereas use of proper antibiotic with recommended dose and duration for STD syndromes was lower⁷.

Partner management was done by 51% of GPs, which is not satisfactory and it should be improved. Use of antibiotics on partners was not according to the national guidelines⁷.

Health education to patients and condom promotion were satisfactory (87% and 71% respectively) but need to be further improved.

Conclusions

Experience of GPs with patients having STI syndromes was more than 50% for all the given six syndromes. Their level of suspicion on the syndromes was more than 50% except for genital growths. They mostly used UFR as the investigation for patients with STI syndromes. Antibiotics were used for management of all the given STI syndromes and different antibiotics were preferred for different STI syndromes.

Partner management was also done by some GPs and some of them managed asymptomatic partners as well. They used investigations on partners and the most common investigation was UFR. They used antibiotics on partners as well but the number was less than that of patients.

Health education and condom promotion was done at GP practice.

Some GPs referred patients with STI syndromes to other healthcare professionals, mostly to local STD clinic.

With reference to national guidelines, their use of antibiotics on patients with STI syndromes was poor.

Considering all above factors, more educational and training programs on STD management for GPs at primary health care are recommended.

References

1. Wetten S.et.al (2015) Diagnosis and treatment of chlamydia and gonorrhoea in general practice in England 2000-2011: a population-based study using data from the UK Clinical Practice Research Datalink.BMJ Open. 2015 Apr 22; 5 (5)
2. Trienekens SC. et.al. (2008-2011) Consultations for sexually transmitted infections in the general

practice in the Netherlands BMJ Open. 2013 Dec 30; 3(12)

3. Lorch R. et.al. (2013) The chlamydia knowledge, awareness and testing practices of Australian general practitioners and practice nurses: survey findings from the Australian chlamydia control effectiveness pilot (ACCEPt).BMC Fam Pract. 2013 Nov 13; 14: 169
4. Kalwij S. et.al. (2003-2011) Using educational outreach and a financial incentive to increase general practices' contribution to chlamydia screening in South-East London BMC Public Health. 2012 Sep 18; 12:802.
5. Homes K. et.al .Sexually transmitted diseases : 4: 555-595: 607-647
6. World Health Organisation. (2007)Training modules for syndromic management of STIs: 2nd ed:
7. STD case management work book , National STD/AIDS Control Programme /Sri Lanka. (2011)
8. Annual report 2013, National STD/AIDS Control Programme, Sri Lanka
9. Annual report 2014, National STD/AIDS Control Programme, Sri Lanka