Net Letter

Syphilis on the rise: A series of 12 cases with mucocutaneous features over a short span

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Sir,

Syphilis, the sexually transmitted bacterial infection, was brought under control with the advent of penicillin. However, in recent times, rise in the incidence of syphilis has been reported by the Center for Disease Control and Prevention.[1] Here, we report a series of 12 syphilis cases with varied clinical features, diagnosed over a short span of two months (July to August 2018) [Table 1] in the sexually transmitted diseases outpatient department of Madurai medical college, Tamil Nadu.

The first case, syphilitic chancre with genital herpes, presented with multiple discrete superficial ulcers on glans penis with few forming geographic pattern [Figure 1a]. Multinucleated giant cells were demonstrated by the Tzanck smear. A circular non-tender ulcer of size approximately 1×1 cm with a clean floor and an indurated base was noted on coronal sulcus [Figure 1b]. Routine smears from this ulcer were negative. A clinical diagnosis of herpes genitalis with chancre was made and the patient treated with tablet acyclovir. There was complete resolution of sores on the glans penis in a week but the ulcer on the coronal sulcus was persistent. After treating with injection benzathine penicillin the persistent ulcer healed in a week's time. The second case presented with multiple, discrete, nontender ulcers of size approximately

Figure 1a: Genital herpes

Figure 1b: Chancre

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Table 1: Details of patients

Patient number	Age in years/ sex	Marital status	Complaints	Exposure history	Darkfield microscopy	Reactive RPR titer	HIV screening
1	30/male	Unmarried	Painful Genital ulcer—10days	Heterosexual, RE: 2 weeks back with unknown female and unprotected	Negative	NR	NR
2	20/male	Married for 6 months	Painless genital ulcer—1 month	Heterosexual RE: 3 days back, marital, unprotected Denies PMC and EMC	Negative	NR	NR
3	22/female (wife of case 2)	Married	Vaginal discharge-1 month, Painless genital ulcer -5 months back	Heterosexual RE: 3 days back, marital, unprotected Denies PMC and EMC	Not done	1:128	NR
4	31/male	Unmarried	Skin rash - 1 and 1/2 months	Heterosexual RE: 3 months back with known female and unprotected	Negative	1:32	NR
5	38/female	Married for 15 years	Skin rash, painless genital ulcer -1 week	Heterosexual RE: 6 months back, marital, unprotected Denies PMC and EMC	Negative	1:128	NR
6	45/male	Unmarried	Skin rash - 15 days	Homosexual RE: 1 month back with unknown male (anoinsertive) and unprotected	Negative (from serous exudate on removing scales)	1:32	NR
7	25/male	Unmarried	Painless genital ulcer- 4 days	Heterosexual RE: 2 months back with known female and unprotected	Positive(from serous exudate on removing scales)	1:8	NR
8	39/male	Married for 10 years	Skin rash - 4 month	Heterosexual RE: 4 months back, marital, unprotected Denies PMC and EMC	Not done (dry lesion)	1:32	Reactive on Tenofovir 300 mg + Lamivudine 300 mg + Efavirenz 600 mg regimen from February 2016
9	44/female (wife of case 8)	Married	Partner screening	Heterosexual RE: 4 months back, marital, unprotected Denies PMC and EMC	Negative	1:8	Reactive on Tenofovir 300 mg + Lamivudine 300 mg + Efavirenz 600 mg regimen from August 2015
10	28/male	Married for 10 years	Perianal growth - 40days	Heterosexual RE: 1 and 1/2 years, marital, unprotected Denies PMC and EMC	Negative	1:64	NR
11	22/male	Unmarried	Perianal growth-2 weeks	Homosexual RE:1 1/2 year back with known male (ano and oro receptive) and unprotected	Positive	1:4	NR
12	25/male	Unmarried	Genital ulcer-3 days	Homosexual RE: 4 days back with unknown male (anoinsertive) and unprotected	Negative	1:64	NR

All the patients denied history of intravenous drug abuse, previous blood transfusion and surgeries. Except for cases 11 and 12 all patients denied a history of previous venereal disease. There was no history of abortion in female cases. NR: nonreactive; RE: recent exposure; PMC: premarital contact; EMC: extramarital contact; RPR: rapid plasma regain test

0.5×0.5 cm on the glans and inner aspect of the prepuce with edematous border and clean floor [Figure 2] and was diagnosed as multiple chancre with non-gonococcal urethritis.

A total of eight cases had secondary syphilis. The spouse of the multiple-chancre patient had bilateral epitrochlear lymphadenopathy, bacterial vaginosis and trichomoniasis. Another patient had erythematous patches and plaque (few were scaly) on the face, trunk and extremities with paronychia on the great toe. He had an annular erythematous plaque with central pigmentation on the cheek and a mucous patch with erythematous papules on the hard palate [Figures 3a-d]. The fifth case had a palmoplantar rash (psoriasiform plaque on sole) [Figure 4], mucous patches on the hard palate and anterior faucial pillar. The sixth case had an annular scaly plaque on the scrotum and erythematous macules on palms [Figure 5]. The next patient had scaly plaque on glans, inner aspect of prepuce and penis [Figure 6]. The patient living with HIV (CD4 count: 401) had lichenoid plaques on scrotum [Figures 7a and b] and palmoplantar rash. His spouse having HIV infection (CD4 count: 432) presented with scaly patches on palms and a mucosal patch on the hard palate [Figure 8]. The tenth patient had flat-topped grayish papules on genitalia, scaly plaques on palms [Figure 9a] and pigmented macules on soles. The perianal mass was excised in a private hospital suspecting it to be a wart but few grayish papules [Figure 9b] were present.

The eleventh patient, a case of persistent chancre in secondary syphilis [Figures 10a-c], treated with injection ceftriaxone in

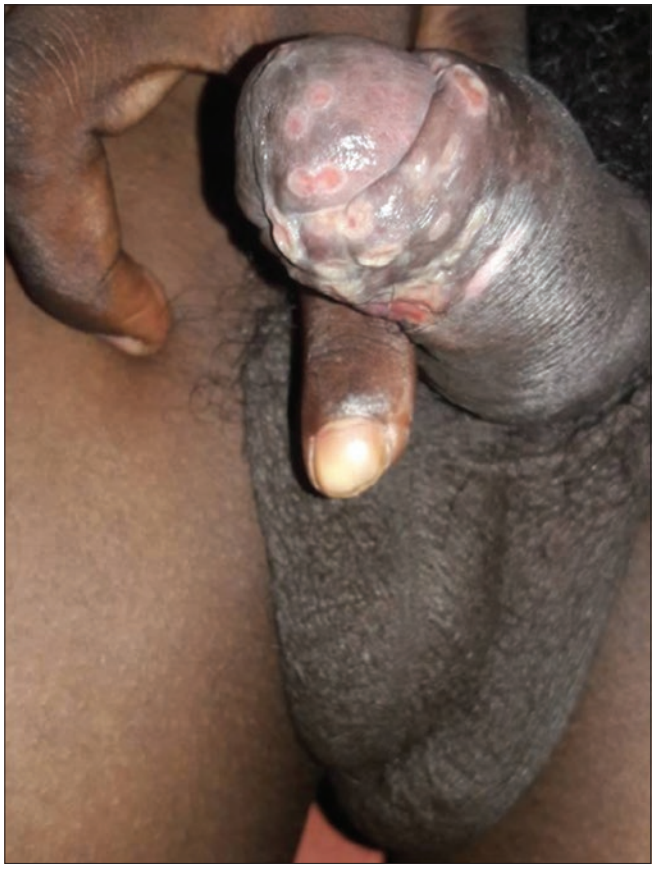

Figure 2: Multiple chancres

Figure 3b: Biet's collarette

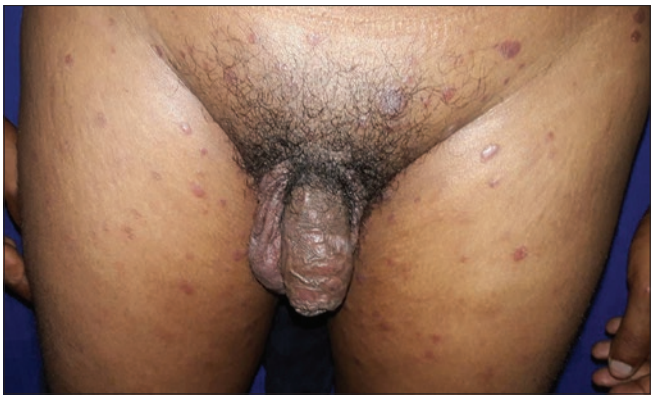

Figure 3a: Papulosquamous rash on trunk and genitalia

Figure 3c: Annular plaque on cheek

Figure 3d: Mucous patch with papules

February 2017, had a clinical relapse in the form of perianal condyloma lata and he denied reexposure. The reinfection of syphilis in a promiscuous individual presented with genital ulcer and reactive rapid plasma regain test in high titer. He was a treated case of late latent syphilis on irregular follow-up.

The relevant bedside and screening tests for sexually transmitted infections were done and syphilis was confirmed in all by positive treponema pallidum hemagglutination test. None of them had systemic involvement and most had only minimal but varied clinical features that were easy to miss if not suspected. The serological tests played a vital role in

Figure 4: Psoriasiform plaques on soles

Figure 5: Annular plaque on scrotum

Figure 6: Scaly plaques on penis

Figure 7a: Lichenoid plaques on scrotum

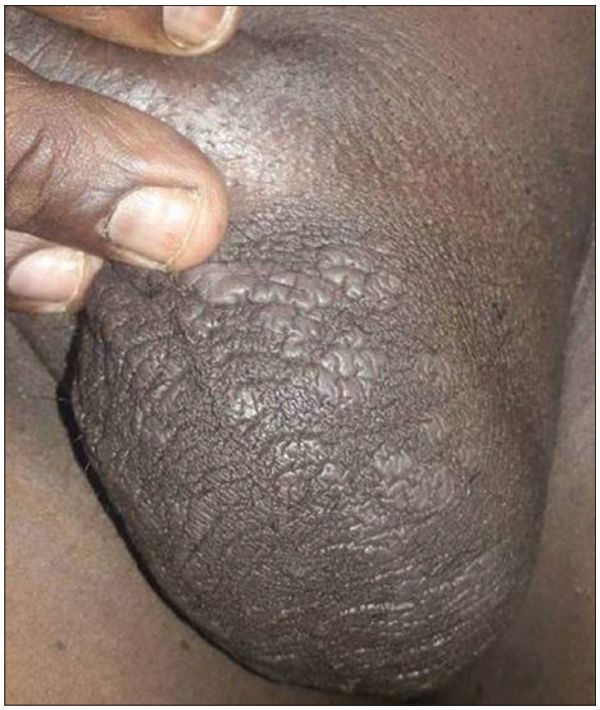

Figure 7b: Lichenoid plaques

Figure 8: Mucous patch on hard palate

Figure 9a: Condyloma lata

Figure 9b: Perianal papules

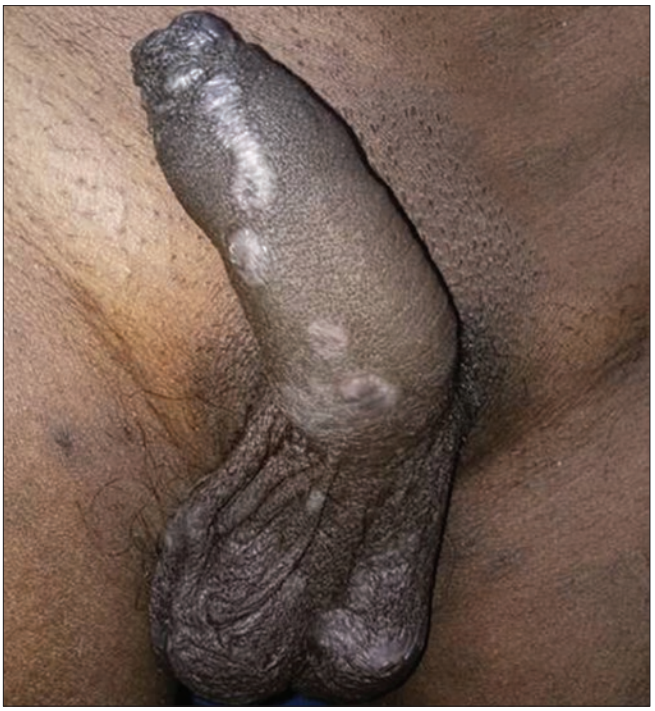

Figure 10a: Condyloma lata

Figure 10b: Persistent chancre

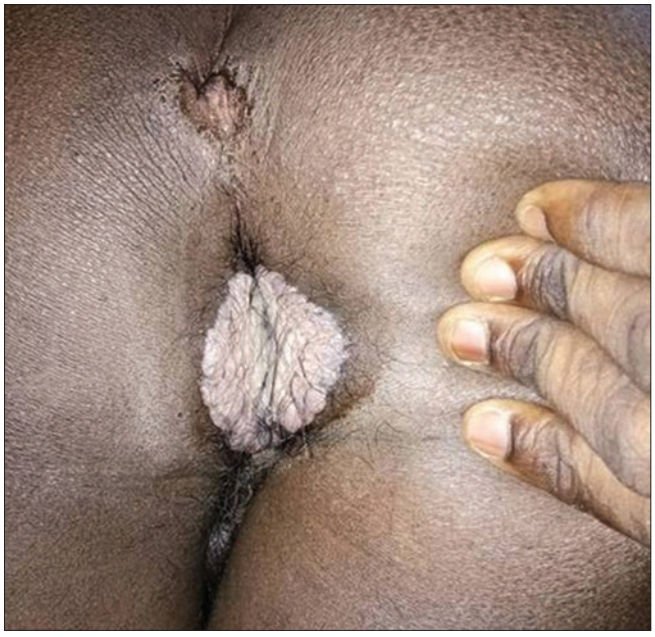

Figure 10c: Perianal condyloma lata

their diagnosis. After proper counseling, all were treated as per the Center for Disease Control and Prevention guidelines with injection benzathine penicillin and also the associated sexually transmitted infections. The mucocutaneous features resolved completely over 1–4 weeks and they are all on follow-up (2 years for those without HIV infection and 5 years for people living with HIV/AIDS). Partner screening was done and the epidemiological treatment was given to the traceable contacts [Table 2]. We had difficulty in tracing partners other than spouse even with proper counseling. This may indicate missed cases in the society which can lead to further spread of syphilis.

The reproductive rate (R) of a sexually transmitted infection = average rate of exposure X average likelihood of infection (33% in syphilis) × duration of infectiousness (about 2 years in untreated syphilis).[2] The average rate of exposure depends on the rate of partner change and the likelihood of

Table 2: Partner screening

Case number	Marital status	Exposure history	Number of partners	Epidemiological dose	Index case and treatment
1	Unmarried	2 weeks back with unknown female and unprotected	1	-	Not traced
2	Married	3 days back, marital, unprotected	1	-	Wife: Treated
3	Married Wife of case 2	3 days back, marital, unprotected	1	-	Not traced
4	Unmarried	3 months back with known female and unprotected	1	-	Informed by a phone call—not traced
5	Married	6 months back, marital, unprotected	1	Given to husband (RPR and TPHA—negative)	Not traced
6	Unmarried	1 month back with unknown male and unprotected	4	-	Not traced
7	Unmarried	2 months back with known female and unprotected 4 months back with unknown female and unprotected	2	-	Not traced
8	Married	4 months back, marital, unprotected	1	-	Not traced
9	Married Wife of case 8	4 months back, marital, unprotected	1	-	Not traced
10	Married	1 and 1/2 years, marital, unprotected	1	-	Not traced
11	Unmarried	1 year back with known male and unprotected	1	-	Not traced
12	Unmarried	4 days back with unknown male and unprotected	7	-	Not traced

TPHA: treponema pallidum hemagglutination test, RPR: rapid plasma regain test

an infected partner.[3,4] If R >1, it indicates increasing incidence and R< 1 indicates decreasing incidence. The strategies to decrease the reproductive rate are creating awareness among public, behavior change intervention in infected persons, using barrier methods**,** early diagnosis and treatment of the sexually transmitted infection and epidemiological treatment.[3]

The clustering of infectious syphilis cases over a short time and challenges in partner treatment and tracing tends to increase the direct variables of the reproductive rate of syphilis. This will increase the prevalence of syphilis especially latent syphilis in the future. Hence, this may be the sign of an impending epidemic and stringent implementation of sexually transmitted infection control measures are needed at present.

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Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

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Conflicts of interest

There are no conflicts of interest.

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