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Correlation between Blood VDRL Positivity and Clinicoepidemiological Profile among Referral Patients from Other Departments in a Tertiary Care Center

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Abstract: ***Introduction: Syphilis is a sexually transmitted infection (STI) caused by Treponema pallidum having varied presentations that can mimic other infections. It is well known for its invasiveness and immune evasiveness if untreated. With increasing awareness, early screening and effective treatment, it is possible to prevent long term complications. Aim: To study the correlation between blood VDRL positivity and clinicoepidemiological profile among patients referred from other departments to Sexually Transmitted Department (STD) O.P. Materials and Methods: A Retrospective observational study was conducted from January 2019 – December 2021 in STD O.P, Institute of Dermatology Venereology & Leprosy, Madras Medical College/RGGGH, Chennai. The study was conducted on Blood VDRL positive referral patients from other departments. Detailed history, physical examination, and other appropriate investigation results were noted. Observations: In the study population, 67% were males and 32.25% were females. Majority of the patients (males-52%;females-30%) were in the age group 20-30 years.50.7% males and 93% females were married.60% males and 20% females had high risk behaviour and also 15.8% males and 10% females had previous history of venereal diseases. TPHA was positive in 70% males and 33.4% females. False positive VDRL was found in 30% males and 66.6% females. Referrals were mostly from medicine, surgery, urology, gynecology, rheumatology and dermatology departments. Conclusion: Our study showed that asymptomatic patients referred from other departments during routine screening revealed more number of VDRL positivity. This in turn reflects the burden in general population, which mandates the intensification of STI program.***

Keywords: Syphilis, Blood VDRL, high risk behaviour, sexually transmitted infection, screening

1. Introduction

Syphilis, the "Great Imitator" is rightly named due to its varied clinical presentation. Long term complications of syphilis such as cardiovascular and neurological manifestations can be prevented by early diagnosis and treatment. Screening and treatment of syphilis can prevent transmission of infection in the community. Patients with syphilis present to various departments with symptoms mimicking other infectious and non-infectious diseases. Hence screening of patients referred from other departments for Sexually Transmitted Infection (STI) would be helpful in identifying the latent syphilis.

Aims and Objectives

To study the correlation between blood VDRL positivity and clinicoepidemiological profile among patients referred from other departments to Sexually Transmitted Department (STD) O.P

2. Materials and Methods

A Retrospective observational study was conducted from January 2019 – December 2021 in STD O.P, Institute of Dermatology Venereology Leprosy, Madras Medical College/RGGGH, Chennai. Blood investigations including Venereal Disease Research Laboratory (VDRL) & Treponema Pallidum Hemagglutination test (TPHA) for syphilis was done.Among 14, 684 Outpatient cases, the study was conducted on Blood VDRL positive referral patients from other departments. Detailed history, physical examination, and other appropriate investigation results were noted.

VDRL negative cases and VDRL positive patients who came for self-screening were excluded.

3. Results

The study had 63 (67%) males and 30 (32.25%) females (Figure: 1).33 (52%) males and 9 (30 %) females were in the age group 20-30 years.15(23%) males and 7(23%) females were in the age group 30-40 years.10(16%) males and 8 (27%) females were in the age group of 40-50 years.5(8%) males and 6(20%) females were above 50 years of age (Figure: 2). 50.7% males and 93% of female were married (Figure: 3).15.8% males and 10 % females had history of previous venereal diseases. High risk behavior was found in 60% males and 20 % females. Male patients mostly presented with skin lesions, genital ulcer, urinary tract infections and balanoposthitis. Female patients presented with vaginal discharge, skin lesions and urinary tract infections. Referrals were mostly from medicine, surgery, urology, gynecology, rheumatology and dermatology departments. TPHA was positive in 70 % males and 33.4% females. False positive VDRL was found in 30% males and 66.6% females.

4. Discussion

Syphilis, the great imitator can have varied clinical presentation and mimic many other diseases. It is prudent to screen all the patients referred from various departments even though they do not manifest with classical symptoms and signs.

Syphilis incognito is a type of latent syphilis which is diagnosed by routine screening with serological tests. In this type the patient does not have a past history of symptoms and signs of primary or secondary syphilis. The emergence of syphilis incognito shows the need of screening in asymptomatic patients[1].

In our study, 52% males and 30% females were in age group 20-30 years. So, majority of the cases were in the age group of 20-30 years which was very similar to the study conducted by John D. Stratigos et al in the year 2001[1]. This may be due to lack of awareness of basic information concerning their sexual health and STI, hesitancy of condom usage, substance abuse and not seeking medical help at the right time. Men (67%) were most commonly affected. Among men, 60% had high risk behavior like extramarital contact, illicit drug use, homosexuality & alcoholism. This is very similar to study conducted by Kalaivani et al in 2016[2].Most of the men, in our study were unmarried and in the younger age group which clearly indicates the unmet needs of sexual health education. The need for effective strategies to educate young unmarried men was pointed out in a study conducted in rural India in the year 2011[3]. Most of the women did not have a high risk behavior or history of previous venereal diseases. This shows that STI in women may not be due to their own sexual risk behavior. Studies showing similar results were conducted by Lall et al in the year 2014[4].According to Oslo study[5], among patients who were isolated and received no treatment, 15% progressed to gummatous syphilis, 10 % progressed to cardiovascular syphilis, 8 % progressed to neurovascular syphilis. Currently, this progression has declined due to the use of antibiotics. Nevertheless, late syphilis still exists and present in atypical and unrecognized forms. In women there is also a risk of vertical transmission.

Biological false positive VDRL reaction is more common among women which denote the presence of non specific antibodies in females due to exposure of immune system to fetal antigens during pregnancy[4].

Asymptomatic patients referred from other departments during routine screening revealed increasing number of VDRL positivity. This reflects the burden in general population, which mandates the intensification of STI program

5. Conclusion

Keeping in mind the diverse impersonating clinical manifestations of syphilis, it is prudent to screen all the patients who are referred from various departments even though they do not present with classical symptoms and signs.

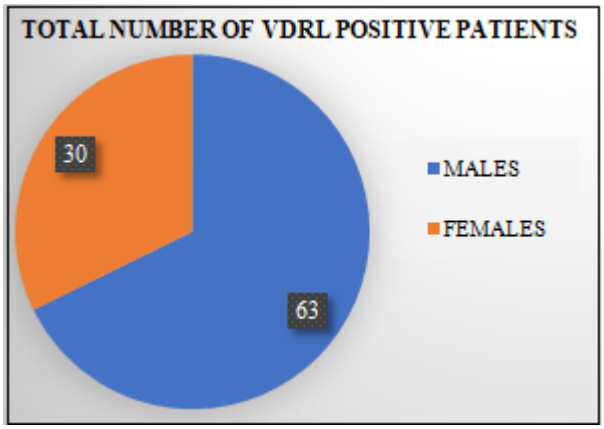

Figure 1

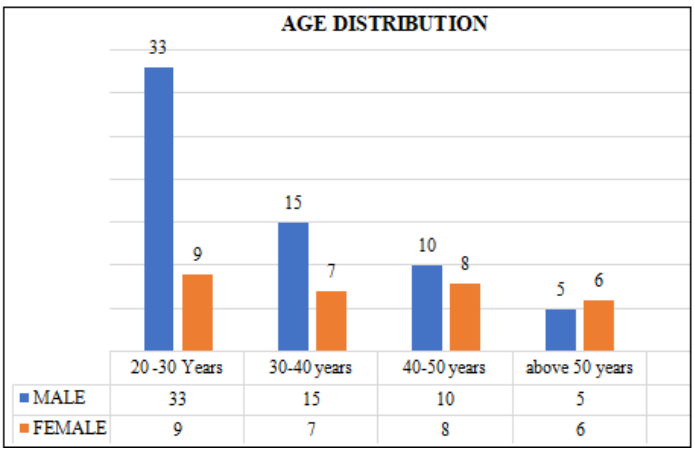

Figure 2

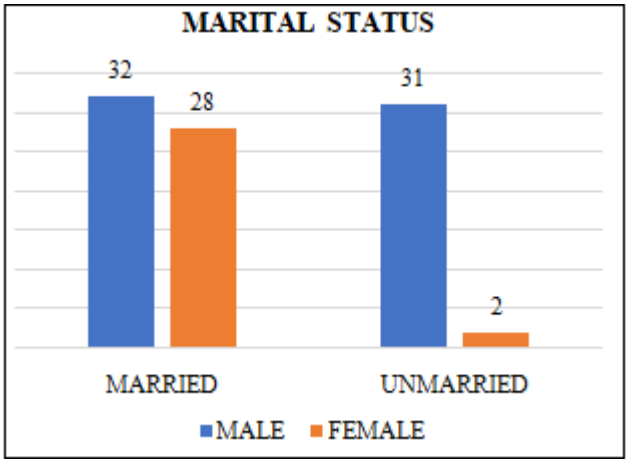

Figure 3

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