

Abstract N°: 181**Changing Clinico-epidemiological trends of Sexually Transmitted Infections : A Retrospective Study in a Tertiary Care Centre**Monal Sadhwani*¹¹Deenanath Mangeshkar Hospital and Research Center, Dermatology, Pune, India**Changing Clinico-epidemiological trends of Sexually Transmitted Infections : A Retrospective Study in a Tertiary Care Centre****Introduction & Objectives:**

The epidemiological profile of sexually transmitted infections (STIs) is more dynamic than any other disease. In addition, sexually transmitted infections promote Human immunodeficiency virus (HIV) transmission by augmenting HIV infectivity and susceptibility. This study aims to determine the epidemiological profile, the pattern of STIs and the prevalence of HIV infection in them in a tertiary care centre at Gujarat (India) over a nine year study period.

Materials & Methods:

A retrospective study of patients attending STI clinic from April 2009 to March 2018 was carried out. The clinical and epidemiological data was collected from the previous records.

Results:

Out of the total 10,939 patients attending STI clinic during the 9 years, STIs were most prevalent among the 25-44 year age group (68.5%). The female:male ratio was 4.5:1 with significant rise in the number of female patients. Incidence of STI was high among married individuals (81.48%). Vaginal discharge was the most common STI, noted in 7416 (67.79%) cases followed by herpes genitalis (12.46%). Viral infections (herpes genitalis, genital warts, and molluscum contagiosum) accounted for 17.81% of the cases. The prevalence of syphilis was 0.94%. There was a rising trend in the number of herpes genitalis and syphilis cases. Prevalence of HIV in STI patients was 7.15%.

Conclusion:

There has been an increase in the incidence of viral STIs with consequent fall in bacterial STIs. STI being higher in married individuals further underlines the importance of prompt management of the sexual partners. The high prevalence of HIV among STI clients demands special preventive strategies.



Abstract N°: 862**Characteristics of prior treatment in patients with recurrent genital warts**

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Introduction & Objectives: Genital warts (GW) are one of the most common clinical forms of human papillomavirus infection (HPV). The frequency of manifestation is influenced by a large number of factors, including promiscuity, smoking, decrease in the body's immunological reactivity, the presence of concomitant infections of the urogenital tract, pregnancy, and others. They can also cause frequent recurrence of GW. However, the rate of recurrence may also be influenced by the methods of GW therapy. As you know, inadequate treatment can cause subsequent relapses. Also, of some importance is the quality of the treatment, such as the appointment of antiviral agents that are ineffective against HPV (acyclic nucleosides); reducing the amount of treatment only to the destruction of GW without stimulating the immune system and reducing the viral load; wrong choice of destruction method.

In this regard, the objective of this study was to characterize previous methods of therapy in patients with recurrent course of GW.

Materials & Methods: We observed 47 non-pregnant women aged 18 to 45 years with a diagnosis of GW, who had 2 or more relapses after therapy.

Results: Most of the patients who applied belonged to the socially adapted category with a moderate income, who did not experience difficulties in obtaining one or another method of therapy. Among them, 10 (21.3%) turned to specialized dermatovenerological institutions, 12 (25.5%) to a gynecologist, 13 (27.7%) - private clinics, 8 (17.0%) - an oncologist, surgeon - 4 (8.5%). Prior to contacting us, the patients received: cryodestruction - 23 (48.9%), diathermocoagulation - 8 (17.0%), chemical destruction - 6 (12.8%), surgical excision - 3 (6.4%), immunotherapy or antiviral treatment - 7 (14.9%), laser destruction - 0 (0%). The area affected by genital warts from 1 to 5 cm² was observed in 18 (38.3%) patients, from 5 to 10 cm² - in 27 (57.4%) and more than 10 cm² in 2 (4.3%) patients. The dynamics of the disease in patients was characterized by either a gradual increase in genital warts (both in size and number) - in 25 (53.2%), or their rapid growth - in 22 (46.8%). Also, we were able to identify other triggers that contributed to the growth and recurrence of GW, such as late referral to specialized specialists, lack of treatment for concomitant sexually transmitted infections (STIs), low adherence to examination of sexual partners, lack of vaccination against HPV 6,11.

Conclusion: The recurrence of GW can be influenced not only by such triggers as late referral to specialized specialists, lack of treatment for concomitant STIs, low adherence to the examination of sexual partners, lack of vaccination against HPV 6,11, but also the quality of the treatment provided, as, for example, the appointment of antiviral agents that are ineffective against HPV (acyclic nucleosides); carrying out only the destruction of GW without affecting the immune system and reducing the viral load; incorrect selection of the method of destruction, such as an attempt to treat large warts with chemical destruction, or the isolated use of local immunomodulators on large areas of damage.

Abstract N°: 891
The many faces of secondary syphilis in HIV: A report of four cases from Greece

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Introduction & Objectives:

The typical cutaneous presentation of secondary syphilis has been well recognized, manifesting as a symmetric maculopapular rash. Although these cutaneous findings are distinct, the clinical picture is not always characteristic. Syphilis and HIV coinfection go hand in hand; syphilis infection increases the risk of HIV transmission, and HIV infection, in turn, can alter the natural history of syphilis. We present distinct manifestations of syphilis in HIV positive patients with features that have been scarcely described in the literature.

Materials & Methods:

We conducted a retrospective review of patients with atypical presentations of secondary syphilis who attended the HIV department from 2019-2022. Herein we present the most interesting ones.

Results:

Case1. A 58-year HIV+ MSM presented with asymptomatic erythematous plaques on the left side of the face. Our clinical diagnosis was DLE. The histology showed a dense plasmacytic infiltrate which raised the suspicion of syphilis. A VDRL test showed an elevated titer of 1:32. The patient was treated with intramuscular benzathine penicillin G (BPG) 2,4 million units. There was a complete resolution of the rash two weeks post treatment.

Case 2. A 54-year-old HIV+ MSM presented with 4-5 papular erythematous pruritic lesions underneath his right shoulder. It was managed as nodular prurigo and treated with topical steroids with no clinical improvement. A week later he manifested new similar papules on both palms and feet. The VDRL test was positive (titre 1/64). The lesions subsided within three weeks post treatment with BPG.

Case 3. A 58-year-old bisexual man from Guadeloupe who had recently travelled to Greece developed multiple nodular lesions of the face. The clinical picture and the background raised the suspicion of leprosy. Investigations were conducted including HIV, syphilis, and leprosy test. He was negative for leprosy; he was though HIV positive and his VDRL came also positive (titre 1/64). The rash completely subsided post treatment with BPG.

Case 4. A 37-year-old HIV + MSM presented in clinic with an erythematous annular lesion of the forehead. The clinical picture was in keeping with granuloma annulare, however given his previous history of syphilis infections, a VDRL test was done which was positive (1/32). The lesion subsided within 2 weeks post treatment.

Three out of four patients were HIV stable with an undetectable viral load and with a CD4 count > 500cells/ml, one patient was diagnosed simultaneously with syphilis and HIV, 3 of the patients had history of multiple syphilis infections in the past and multiple partners. The mean age is 53 years old. They were all MSM, one of them was also MSW. Three out of four presented with unusual rashes of the face. They have been all treated with BCG. (Table 1)

Conclusion:

Recognition of atypical cutaneous manifestations of secondary syphilis in HIV is critical for adequate management. Due to diverse clinical presentations, diagnosis can occasionally prove challenging. The biopsy in some cases is crucial for the diagnosis.

HIV-positive patients present with secondary disease like in our case which is often more aggressive, presenting with greater constitutional symptoms, greater organ involvement and atypical rashes.

We suggest clinicians maintain an elevated suspicion of syphilis infection especially in MSM with risky sexual behaviour who present with unusual rashes. Early treatment of syphilis is crucial as it reduces the risk of transmission.

Patient	A	B	C	D
Age at dx	58	54	58	37
Gender	M	M	M	M
Sexual orientation	MSM	MSM	Bisexual	MSM
Year of HIV diagnosis	2006	1996	2022	2017
VL at time of syphilis dx	Undetectable	Undetectable	10.200 copies	Undetectable
CD4 at time of MCC dx	775 cells/ml	650 cells/ml	255 cells/ml	500 cells/ml
Rash location	Face	Back	Face	Face
Clinical impression	DLE	Nodular prurigo	Leprosy	Erythema annulare
Treatment	(BPG)2,4 million units	(BPG)2,4 million units	(BPG)2,4 million units	(BPG)2,4 million units

Table 1. Patients' characteristics

Table's abbreviations

MSM: Men having sex with men

Dx: Diagnosis

VL: Viral load

DLE: Discoid lupus erythematosus

BPG: Benzathine Penicillin G



Abstract N°: 953**the great imitator' strikes again: an unusual presentation of neurosyphilis**

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Introduction & Objectives:

Syphilis is well known as 'the great imitator' due to its wide array of clinical presentations. The diagnosis of neurosyphilis 'still' poses a challenge to clinicians due to the shortcomings of 'sensitive' testing modalities and diagnostic criteria available. Here, we report an 'unusual' presentation of sequential bilateral facial palsy. Our patient's response to treatment with intravenous penicillin, despite his negative cerebrospinal fluid (CSF) analyses suggests that further research is needed in diagnostic testing pertaining to neurosyphilis.

Materials & Methods:

A 62-year-old man presented with sequential bilateral facial palsy and ataxia. His symptoms failed to resolve to systemic steroids started in the community, warranting further investigation. His blood serology revealed positivity for treponemal EIA, TPPA (Treponema pallidum particle agglutination assays) and RRR (Rapid plasma regain) which indicated an active syphilis infection. Although these blood tests were positive, his lumbar puncture revealed lymphocytosis and mildly elevated protein levels, which were both in keeping with the diagnosis of neurosyphilis. Despite this, his CSF Venereal Disease Research Laboratory (VDRL) test remained negative. He was treated with IV Benzylpenicillin 2.4g every four hours for 14 days and undertook physiotherapy and eye care to reduce the risk of exposure keratitis. The patient made a complete recovery and was discharged from further follow up.

Results:

Although our patient's serum EIA and TPPA were positive for syphilis, they are not part of the diagnostic criteria for neurosyphilis. His CSF protein was normal, but his WBCs were elevated above $5 \times 10^9/l$, and he had clinical signs (although not typical of syphilis) without an alternate known cause. Although we did fit the criteria proposed by the Centers for Disease Control in Europe and America, the rare presentation of a sequential bilateral facial palsy as seen in our patient, especially in a HIV-negative individual, has seldom been reported, which lends this case importance.

Conclusion:

This case highlights a rare presentation of neurosyphilis (seen in less than 5% of this patient cohort) and questions the role of CSF VDRL in the diagnosis of this condition. Although this test is highly specific, and is seen as a 'gold standard'; its variable sensitivity (30 – 70%) raises questions about how effective it is in diagnosing neurosyphilis. Ultimately, this clinical report emphasizes the need for a low threshold to test for syphilis in patients presenting with unusual neurological symptoms. Serological tests should be a diagnostic aid but not supersede clinical acumen. Antibiotic treatment should be initiated promptly if a diagnosis of neurosyphilis is possible based on serological testing, CSF examination, and elimination of other diagnoses.

Abstract N°: 973**Severe Immunosuppression - Pleomorphic and Disseminated Kaposi Sarcoma**

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Introduction & Objectives: Described by Moritz Kaposi as a multiple idiopathic pigmented sarcoma of the skin, Kaposi Sarcoma (KS) is a rare angioproliferative tumor that originates from endothelial cells and is caused by human herpes virus type 8. Nonetheless, it is classified into four clinical-epidemiological variants: classic (Mediterranean), endemic (African), iatrogenic (transplanted-related) and epidemic (HIV/AIDS-associated). It was initially considered a rare pathological entity that affected only a few groups, however it gained notoriety with the AIDS Pandemic. Kaposi Sarcoma is notable for the heterogeneity of its clinical presentation: macules, papules, plaques, nodules or even verrucosities. KS frequently involves the viscera and the gastrointestinal tract. However, when there is pulmonary involvement, the picture is usually severe. It is a defining neoplasm of severe immunodeficiency, which generates a great impact on public health due to its high magnitude and mortality. There is a true therapeutic arsenal for the treatment of injuries, which depend on the amount of them and their effects.

Materials & Methods: Black-skin, 26-year-old transgender woman, from Brazil. The patient reports the onset of cutaneous involvement with a purplish macula on her forearm that evolved with a change in appearance and an increase in the initial lesion, in addition to the appearance of new lesions disseminated all over the body. The patient refers that because of the countless pleomorphic lesions and progressive edema in the right lower limb, associated with a lesion in the plantar region that impaired her gait, she sought care and was diagnosed with HIV. The anatomopathological exam confirmed the diagnosis of Sarcoma Kaposi. Medical tests revealed a CD4 T cell count of 42 and a viral load of 906,081 copies. A confounding factor with possible lymphedema was a previous history of application of industrial silicone in her lower limbs. There was a report of migration of the product to more distal regions of the leg and ankle - Ultrasound scan showed "snowstorm" artifacts, compatible with the presence of industrial silicone.

Results: The high incidence of immunosuppressed patients in our midst emphasizes the need for early recognition and diagnosis of KS. In the differential diagnosis of cutaneous lesions, especially in initial cases, the following should be included: angiosarcoma, benign lymphangiomatosis, microvenular angioma and hemangioma. Other lesions that can produce SK-like lesions are: cutaneous metastases from various neoplasms, lymphoma or cutaneous leukemia, venous or lymphatic malformations, the latter are easily differentiated from KS by histological study.

Conclusion: Exuberance and pleomorphism of cutaneous mucosal lesions (coursing with lymphedema) in an immunosuppressed patient. It is important to reiterate the performance of serologies, especially for HIV detection.

Abstract N°: 1107**Prevalence and antibiotic resistances of gonococcal infections in southern Germany**

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Introduction & Objectives:

Gonorrhoea, caused by the bacteria *Neisseria gonorrhoeae* is one of the world's most prevalent sexually transmitted infections (STI) and can lead to severe complications. Therefore, a fast and targeted therapy incorporating up-to-date knowledge about antimicrobial resistances is crucial. Not all countries are tracking and evaluating comprehensive data about gonorrhoea cases and analyze current resistances. The aim of the study was to assess the local prevalence of antibiotic resistances in southern Germany.

Materials & Methods:

In this retrospective study, data was collected for all patients receiving STI-diagnostics at a tertiary dermatology department between January 2017 and April 2020. Symptoms, diagnostic methods and the diagnostic outcome were documented. If patients were diagnosed for gonococcal infections, tests for antimicrobial resistances were performed in two distinct laboratories. Resistance tests for the antibiotics Ofloxacin, Ciprofloxacin, Azithromycin and Ceftriaxon were performed from swab specimens (n=42). For a fraction of the gonorrhoea-positive patients, a urine culture was processed in addition (n=26), which was analyzed for resistances against Ciprofloxacin, Doxycyclin, Penicillin, Azithromycin and Ceftriaxon. Descriptive statistics were conducted on the collected data.

Results:

A total of 358 people participated in the study with 97.5% of all patients being male and having a mean age of 32.2 years (range: 17-71 years). A fraction of 13.4% (n=48) was diagnosed for gonorrhoea with all being male. For 89.6% of all detected gonococci, resistance tests were performed for multiple antibiotics. For the remaining 10.4%, *Neisseria gonorrhoeae* was only detected via PCR and therefore no antimicrobial resistance tests were possible. In about two thirds of all analyzed samples, resistance to Ofloxacin (swab: 65%), Ciprofloxacin (swab: 70%; urine: 61.5%) and Doxycyclin (urine: 65.4%) was detected and about one third being resistant to Penicillin (urine: 31.8%). Resistance to Azithromycin was prevalent in about one third of all cases (swab: 21.4 %; urine: 42.3%). No resistance to Ceftriaxon was detected in either swabs or urine samples.

Conclusion:

In line with previous studies, resistance to Ofloxacin, Ciprofloxacin, Doxycyclin and Penicillin was prevalent in a large fraction of all cultures. In particular, the resistance rate to Azithromycin was high compared with similar studies from Europe. No resistance was found against Ceftriaxon, while few cases were already reported in Europe.



Abstract N°: 1452
High Prevalence of Azithromycin-Resistance among *Mycoplasma genitalium* infections in Austria

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Introduction & Objectives:

Mycoplasma genitalium (MG) is an emerging sexually transmitted infection (STI) that may cause non-gonococcal urethritis and is associated with symptomatic disease at extra genital sites. Recent reports indicate a high prevalence of MG in men who have sex with men (MSM) that often harbour azithromycin (AZM) resistant variants. Frequency of MG may vary substantially between geographical regions, yet no data has been available for Austria. Thus, we aimed to investigate the prevalence of MG and the disease characteristics at the largest Austrian HIV-& STI-clinic.

Materials & Methods:

Available MG nucleic acid amplification test (NAAT) results at the Medical University of Vienna from 02/2019-03/2022 were retrospectively evaluated. Clinical characteristics and patient's demographics were analysed.

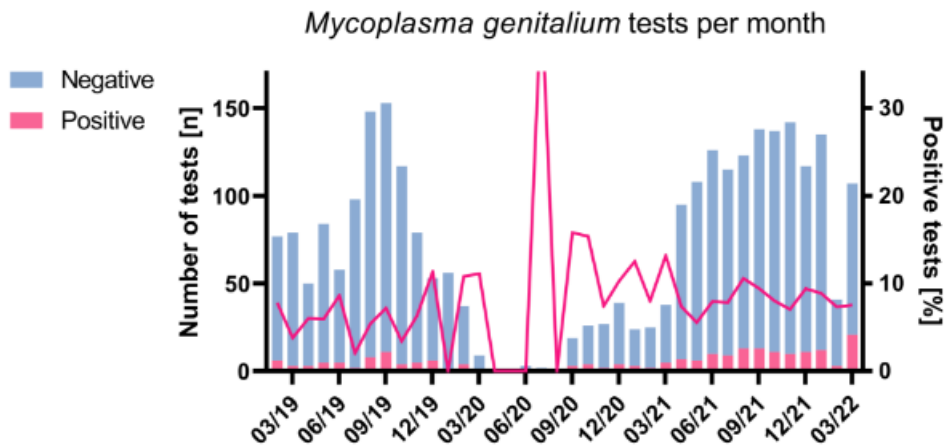
Results:

Mean age of the study population was 37.2 ± 12.5 years, 83% (1479/1775) were male, 53% (940/1775) MSM, 31% (540/1754) HIV+, 15% (267/1775) were using HIV pre-exposure prophylaxis (PrEP) and 27% (486/1775) had previously been infected with syphilis. Among 2671 MG tests, 199 distinct MG infections were identified affecting 10% (178/1775) of all included individual patients. Monthly positivity rate remained quite stable at 7% (Figure). Notably, limited STI-screening access and non-availability of MG-NAATs led to a dramatic decrease in MG testing from 03/2020-09/2020. In logistic regression analysis, we identified 'MSM' (adjusted odds ratio 2.55 (95% confidence interval 1.65-3.92)), 'use of PrEP' (aOR 2.29 (95%-CI 1.58-3.32)) and 'history of syphilis' (aOR 1.57 (95%-CI 1.01-2.24)) as independent predictors for a MG infection. Fifty-five percent (110/199) of all MG infections were found in the urethra whereas anal, pharyngeal and cervical infections were found in 40% (80/199), 2% (4/199) and 3% (5/199), respectively. The majority of infected individuals was asymptomatic (68%, 135/199), still, 22% (43/199) presented with urethritis, 8% (15/199) with proctitis, 1% (1/199) with pharyngitis and 3% (5/199) with cervicitis. Coinfections with chlamydia or gonorrhoea were detected in 13% (26/199) and 19% (37/199), respectively. Eighty-nine percent (178/199) received MG treatment: 11% (21/178) doxycycline, 52% (92/178) azithromycin and 37% (65/178) moxifloxacin that led to a negative follow-up test in 63% (5/8), 76% (44/58) and 85% (34/40), respectively. AZM resistance analysis was implemented in 03/2021 (available for 57% (114/199)) and was detected in 68% (78/114). AZM resistance guided therapy achieved a 90% cure rate whereas empirically chosen AZM treatment (prior to 03/2021) was efficacious in only 68%. The proportion of MSM was significantly higher among those harbouring AZM-resistance vs. all other infections (94%, 73/78 vs. 73%, 88/121; $p < 0.001$).

Conclusion:

In this Austrian observational study, MG was readily detected as a mostly asymptomatic infection among MSM with a stable prevalence throughout the observation period. Resistance analysis revealed a worryingly high

prevalence of AZM-resistance emphasising the empiric use of moxifloxacin if AZM-resistance analysis is unavailable.**



Abstract N°: 1676

Prevalence of sexually transmitted infections among convicted women of Ukraine

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Introduction & Objectives: According to the WHO, the highest incidence of sexually transmitted infections (STIs) and HIV infection is observed in penitentiary institutions, where more than 10 million people are present currently in the world. At the same time, convicted women of the reproductive age group make up to 5% and demonstrate a high prevalence of STIs/HIV.

The aim of the of the work is to analyze the spreading of STIs/HIV among convicted women in Ukraine, as well as the risk factors of infection.

Materials & Methods: The data of the own research of 120 convicted women aged 23 to 53 from the key risk group for STI/HIV infection, who are in prisons in Ukraine, are presented, and some social characteristics of the convicts and risk factors for the spread of sexually transmitted infections are also analyzed. Serological markers of *Treponema pallidum* were diagnosed by non-treponemal tests, rapid plasma reagent tests, and treponemal tests (immunoenzyme, passive hemagglutination reaction, immunofluorescence reaction).

Determination of antigens of *Chlamydia trachomatis* and *Ureaplasma urealyticum* was carried out using PCR, verification of gonococcal, and trichomonad infection - bacteriology methods with the use of selective nutrient media. Serological indicators of the spread of viral infections (HSV-1, HSV-2, HCV), HBV, and HIV) were evaluated using appropriate kits for ELISA diagnostics.

Results: It has been confirmed that convicted women, as a separate social group, have increased risks of STI/HIV infection in penitentiary institutions. According to research data, it was established that serological markers of *T. pallidum* (13.3%) and other STIs, as a *C. trachomatis* (38.3%), *U. urealyticum* (5.8 %), *Trichomonas vaginalis* (33.3%), *Neisseria gonorrhoeae* (11.1%), HSV-1 (98.3%), HSV-2 (73.3%), HCV (25.8%), HBV (11.7%), HIV (50.8%).

The risk factors of STD infection in convicted women were, in particular, hidden forms of infection, risky sexual behavior (95.8%), in particular, starting sexual life from the age of 14 (95.8%), and not using barrier means of personal protection (93.3 %) with a large number of sexual partners (83.3%), providing sexual services for money (78.3%), noted sexual violence against themselves (33.3%), noted the presence of tattoos (30.8%), most of which were committed in prison in inadequate sanitary conditions, did not have a family (79.5%) and did not receive financial support from home, and were also incarcerated again (44.1%).

It should be especially noted that the majority of female prisoners had sexual contact without the use of condoms during meetings.

Conclusion: The high concentration of key groups in the institutions of the penitentiary system regarding the risk of STD/HIV infection creates a unique opportunity for further scientific research and the practical application of several effective treatment-diagnostic and organizational-preventive public health measures.

Treatment and prevention measures for STDs in institutions of the penitentiary system should be based on mandatory and timely diagnosis using, including, treponemal tests to detect *Treponema pallidum*, taking into account the increase in the frequency of hidden forms. As well as adequate treatment in combination with the promotion of safe sexual behavior and changes in moral attitudes towards sexual life and the use of psychoactive substances.

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Abstract N°: 1745**Sexual and oral diseases in the art of Finnish artist Kalervo Palsa (1947-1987)**Nicolas Kluger^{1, 2}

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Introduction & Objectives:

Kalervo Palsa was a Finnish artist from Kittilä, Lapland, where he lived all his life. His works are related to surrealism, nativism and primitivism. He described his art as *fantastic realism*. For Palsa, the essence of art was the brutality of life, sexuality and death. During his lifetime he painted more than a thousand pictures in a wide variety of techniques. His influences included Van Gogh, Magritte, Dix, Munch, Strindberg and Bacon. The Irish painter Francis Bacon (1909-1992) is known for his fascination with the mouth, hence the many depictions of figures with open or distorted mouths. Bacon used a 19th century atlas of mouth diseases as a source of inspiration. It was in this context that Palsa painted several works with equivocal titles, relating to sexually transmitted infections, and maxillofacial surgery.

Materials & Methods:

A review of diseases-related artworks by Kalervo Palsa from the Finnish National Gallery website (<https://www.kansallisgalleria.fi/>) and from Kemi Art Museum

Results:

The Finnish National Gallery currently owns 3039 artworks by Palsa. We found 8 artworks related to either primary, secondary, tertiary and congenital syphilis (n=4), dental problems (n=2) and maxillo-facial surgery (n=3). The Kemi Art Museum owns 37 artworks, including syphilis (n=1), chancroid (n=1), lymphogranuloma venereum (n=1), candidiasis (n=1) and maxilla-facial surgery (n=1). All the genital lesions affected male. All the artworks belong to the Maj-Lis Pitkänen collection and have been donated to both museum.

Conclusion:

Following the steps of Francis Bacon, Kalervo Palsa had access to medical books, mainly about venereal diseases and orofacial surgery, from which he took inspiration. The technique is light, the colours are pastel and the brushstrokes are light, but the subject is heavy.

Palsa dealt with subjects such as necrophilia, masturbation, homosexuality or bisexuality, celibacy, fetishes or suicide. Palsa wanted to depict man's degenerate attitude to life.

During his lifetime, Palsa's art was publicly described as pornographic and 'trashy'. This may have been his intention to shock and outrage and, as is often the case with this type of artist, it was not until after his death that his art gained renewed interest.

Abstract N°: 1922

Whole genome sequencing of *Neisseria gonorrhoeae* demonstrates sexual mixing throughout a spectrum of different risk groups

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Introduction & Objectives:

Sexually transmitted infections (STIs), such as Gonorrhoea (Ng), are commonly observed among men who have sex with men (MSM). The current targets set by the World Health Organization for combating STIs until 2030 appear to be unattainable. Hence, it is crucial to gain an understanding of transmission networks. In this study, we employed whole genome sequencing (WGS) to identify Ng-clusters and evaluate patterns of sexual mixing.

Materials & Methods:

WGS was used for cluster analysis of Ng-isolates collected at the Medical University of Vienna, Austria. Patient characteristics, HIV status and infection-specific details were obtained from the medical records.

Results:

Genotypic analysis and demographic data were available for 415 isolates; the vast majority of infections were observed in men 96% (397/415), 11% (47/415) were using HIV pre-exposure prophylaxis (PrEP), 22% (78/359* HIV status was missing in 56 individuals) were HIV-positive and median age was 30.9 years. Furthermore, patient's histories corresponding to the isolates revealed previous infections with gonorrhoea and syphilis in 29% (119/415) and 23% (96/415), respectively. The majority (75%, 312/415) of isolates were collected from the urethra followed by 20% (84/415) sampled from the anal mucosa, 2% (10/415) from the cervix and 2% (9/415) from the pharynx.

Forty-four percent (182/415) of all isolates were associated with one of the 31 Ng-clusters (Table). Out of these clusters, nine consisted exclusively of samples from heterosexual individuals (women: N=4, men: N=50), while nine clusters comprised only samples from MSM (HIV-negative: N=22, HIV-positive: N=13). Thirteen clusters included samples from both heterosexual individuals and MSM (HIV-negative: N=75, HIV-positive: N=18). In regression analysis, we investigated factors associated HIV-serodiscordant clustering: univariate analysis identified 'MSM' (odds ratio 10.24, 95%-confidence interval 5.02-20.89), 'use of PrEP' (OR 3.30, 95%-CI 1.18-9.24) and a history of any STI (OR 4.19, 95%-CI 2.16-8.12) as statistical significant predictors. However, in multivariate analysis, only 'MSM' predicted clustering with isolates from HIV-positive individuals (adjusted odds ratio 10.24 (95%-CI 5.02-20.90)).

Conclusion:

We observed sexual mixing among MSM living with and without HIV as well as non-MSM. Thus, given the high burden of STIs among MSM, non-MSM are likely also to benefit from prevention strategies targeting MSM only. Furthermore, in the current era of PrEP and 'treatment as prevention' (undetectable = untransmittable), the

clustering of individuals with differing HIV statuses highlights the diminishing relevance of HIV-status for risk group stratification.

Composition of clusters by transmission group	Number of clusters N=31	Number of individual samples within the clusters Heterosexual		
		Women	men	MSM
Heterosexual men and women*	9	4	50	0
HIV serodiscordant clusters	1	0	7	0
MSM	9	-	-	35
Only HIV- clusters	4	-	-	14
Only HIV+ clusters	1	-	-	6
HIV serodiscordant clusters	4	-	-	15
Heterosexual men, women and MSM	13	1	36	56
HIV serodiscordant clusters	9	1	26	53

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Abstract N°: 2692
Multicentric evaluation of a specific intrathecal anti-Treponema pallidum IgG index as a diagnostic biomarker of neurosyphilis: results from a retro-prospective case-control study

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Introduction & Objectives:

The diagnosis of neurosyphilis (NS) lacks a true “gold standard” which makes the diagnosis challenging while the consequences of a misdiagnosis are potentially severe.

The aim of this study was to evaluate the diagnostic performance of measuring an antibody index (AI) for intrathecal synthesis of specific anti-Treponema pallidum (Tp) IgG for the diagnosis of NS.

Materials & Methods:

We evaluated an AI for intrathecal synthesis of specific anti-Tp IgG on paired cerebrospinal fluid (CSF)-serum samples collected between 2007 and 2022 from patients suspected of NS, in Switzerland. Two definitions for NS were used: NS1 included patients with suspicion of NS presenting symptoms suggestive of central nervous system (CNS) involvement, and positive TPHA/TPPA serology and CSF-TPHA/TPPA ≥ 320 , and either CSF-leucocytes > 5 cells/mm³ and/or CSF-protein > 0.45 g/l and/or a reactive CSF-VDRL/RPR test. NS2 included patients with suspicion of NS presenting acute ocular and/or otologic symptoms, and positive TPHA/TPPA serology, and a favorable response to NS treatment. Controls were patients diagnosed with any other CNS pathologies and with positive TPHA/TPPA serology.

CSF parameters were analyzed and anti-Tp IgG were measured simultaneously in serum and CSF. AI was calculated according to Reiber diagram. We estimated the AI test area under the ROC curve, its sensitivity/specificity, and positive and negative predictive values using plausible NS prevalence reflecting routine data.

Results:

The study included 71 NS (43 NS1 and 28 NS2) and 110 controls. With a threshold of ≥ 1.7 , sensitivity and specificity of the specific AI test were 90.7% (IC 77.7-97.4) and 100% (IC 96.7-100.0) respectively for NS1 and 14.3% (IC 4-32.7) and 100% (IC 96.7-100.0) for NS2. In patients suspected of NS with a CNS involvement (NS1 group), where NS had a prevalence of 28%, neurosyphilis could be confirmed by the positivity of this specific AI.

Conclusion:

The measure of an intrathecal synthesis index of specific anti-*Tp* IgG in patients with inflammatory signs in CSF appears to be a reliable diagnostic test to assess a neurosyphilis. However, in otic or ocular syphilis, presenting few or no abnormalities of CSF, the AI alone is not sufficient to rule-out the diagnosis of neurosyphilis.

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Abstract N°: 2770**Dermatological follow-up on MPX virus infections (Mpox): clinical spectrum, quality of life and scarring**

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Introduction & Objectives:

Since May 2022, mpox (formerly “monkeypox”) outbreaks have been reported outside of the usual endemic areas. These cases have been predominantly linked to sexual transmission, disproportionately affecting men who have sex with men (MSM). Despite a high number of cases, little is known about longer-term consequences of mpox, including its impact on quality of life and scarring. The objective of this cohort study was to assess disease characteristics during the initial infection and to investigate sequelae at 4-6 months of follow-up.

Materials & Methods:

Patients with laboratory (PCR)-confirmed mpox were consecutively enrolled in the study. Disease and patient characteristics such as the localization of lesions, symptoms, sexual behaviour, comorbidities and concomitant medication were assessed at baseline through a series of questionnaires. Patients were treated according to standard protocols, which typically included topical antiseptics and further medical care as indicated. We invited participants to a follow-up visit at 4-6 months, and used standardized instruments to assess scarring (Patient and Observer Scar Assessment Scale, POSAS) and quality of life (Dermatological Quality of Life Index, DLQI).

Results:

Forty-three patients, age range 19-64 years, including 41 men (all MSM) and 2 women, were included. Ten patients (23.3%) were HIV-positive; all were under effective antiretroviral therapy. Upon diagnosis, skin or mucosal lesions were present in 93.0% of cases; Table 1 shows the lesions' localization and frequency of complications. Pain was reported by 73.3%, with an intensity (NRS 0-10) of 8 (median; Q1-Q3: 6-10). Anal involvement resulted in a significantly higher frequency of pain than genital localization (RR 3.60, 1.48-8.74, p=0.001). Inpatient treatment due to pain, superinfection, abscess or other indication was required in 20 patients (46.5%).

After 4-6 months, the majority of patients did not suffer from significant limitations in everyday life, extensive scars or pain. However, patients with superinfection or abscess during the acute phase had significantly more extensive scar formation and experienced a significantly greater impairment of their quality of life and sexuality, compared to patients without such complications (Table 2).

Table 1: Clinical characteristics during initial infection		
	n	(%)
Localization of lesions¹ (n = 35)		
Genital	17	(48.6)
Anal	13	(37.1)
Mouth / Throat	9	(25.7)
Face / Neck	11	(31.4)
Torso	11	(31.4)
Limbs	13	(37.1)
Complications at diagnosis¹ (n = 43)		
Patients with complications	20	(46.5)
- Bacterial superinfection (without abscess)	10	(50.0)
- Abscess	5	(25.0)
- Anal fissure	2	(10.0)
- Anal bleeding	1	(5.0)
- Epididymitis	1	(5.0)
- Epiglottitis	1	(5.0)
- Gastroenteritis	1	(5.0)
- EBV reactivation	1	(5.0)
- Infection-associated rash	1	(5.0)

¹multiple answers possible

Table 2: Quality of life, sexual impairment and scar quality 4-6 months after infection, in relation to bacterial superinfections or abscesses during the acute phase (median Q1-Q3, p generated from Mann-Whitney U tests)					
	Bacterial superinfection/abscess		No bacterial superinfection/abscess		p
Dermatology Life Quality Index (DLQI), n=17					
Median (Q1 – Q3)	2.0	(1.0 – 5.5)	0.0	(0.0 – 1.0)	0.036
Sexual Impairment (Scale 0-10), n=19					
Median (Q1 – Q3)	5.0	(0.5 – 7.5)	0.0	(0.0 – 0.8)	0.017
Pain (Scale 0-10), n=17					
Median (Q1 – Q3)	0.0	(0.0 – 0.0)	0.0	(0.0 – 0.0)	0.864
Observer Scar Assessment Scale (OSAS), n=16					
Median (Q1 – Q3)	18.5	(12.3 – 22.8)	11.0	(9.0 – 13.8)	0.059
Patient Scar Assessment Scale (PSAS), n=14					
Median (Q1 – Q3)	24.0	(14.0 – 34.0)	11.0	(9.0 – 14.0)	0.039
The higher the P/OSAS sum score, the poorer the quality of the scar. There are no severity ranges.					

The higher the P/OSAS sum score, the poorer the quality of the scar. There are no severity ranges.

Conclusion:

A wide range of skin and mucosal involvement including visible or sensitive areas was observed in this sample of relatively severely affected mpox patients. After 4-6 months, the majority had inconspicuous scars, and their quality of life was not significantly affected. However, patients who experienced bacterial superinfections and/or abscesses during the acute phase reported a significantly reduced quality of life and relevant sexual impairment. Hence, it may be crucial to prevent such complications by providing adequate antiseptic and/or antibiotic treatment during the acute phase.



Abstract N°: 2775**Trichophyton mentagrophytes genotype VII – an emerging sexually transmitted fungal infection relevant for men who have sex with men**Ricardo Niklas Werner^{*1}, Christoph Zeyen¹, Alexander Nast¹

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Introduction & Objectives:

Trichophyton mentagrophytes genotype VII (TM-VII) is an independent genotype within the Trichophyton mentagrophytes/interdigitale complex. While it can cause various types of tinea, infections predominantly manifest as inflammatory and purulent trichophytia affecting the pubogenital, gluteal, and facial areas. Since its initial genetic characterization, TM-VII has raised suspicions of primarily being sexually transmitted, both in heterosexual contacts and in sexual networks of men who have sex with men (MSM).

Materials & Methods:

A retrospective chart review was conducted on a consecutive series of patients diagnosed with culturally confirmed TM-VII infection at our dermatology department in 2023. Disease and patient characteristics, including lesion localization and morphology, as well as data on the clinical course, sexual behaviour, and risk factors were extracted from their medical records.

Results:

Between January 1 and May 15, 2023, our dermatology department diagnosed six patients, all of whom were of male gender, with TM-VII infection. Their ages ranged from 27 to 34 years. None of the patients reported contact with animals. Four patients reported using HIV pre-exposure prophylaxis (PrEP), and one was living with HIV. Sexual orientation information was available for five patients, all of whom identified as MSM. One patient had experienced six sexually transmitted infections (STIs) in the 12 months preceding the TM-VII diagnosis. Clinically, five patients presented with erythematous, purulent, infiltrated plaques and/or pustules (suppurative trichophytosis, Majocchi's granuloma), while one exhibited marginally infiltrated erythematous scaly plaques ("ringworm lesions"). Lesions were observed in one to three body regions, with the pubogenital, gluteal, facial, and scalp regions affected in 4, 2, 2, and 1 cases, respectively. Table 1 provides an overview of the patient and clinical characteristics. Four patients reported severe pain. The duration between symptom onset and diagnosis in this series was 47.2 days (mean, SD=7.62); the duration of systemic therapy was 70.5 days (mean, SD=7.76, n=4).

Conclusion:

Based on the localization of the lesions and the sexual risk factors of the patients, our case series provides further evidence suggesting that TM-VII infections are predominantly sexually transmitted. Understanding the mode of transmission is crucial, as this knowledge can have significant implications, such as screening key groups for signs of infection and partner tracking measures. Moreover, the relatively long period between symptom onset and diagnosis in our case series highlights the importance of raising awareness about the symptoms and presentation of TM-VII infections.

Table 1: Patient and clinical characteristics

Patient	Age	MSM	PrEP use or known HIV infection	Clinical Presentation
1	27	n.i.	n.i.	Erythematous plaque with pustules (pubogenital area), hairless plaque (scalp)
2	34	Yes	HIV infection, VL undetectable	Subcutaneous, deep infiltrated plaques with multiple pustules and erosions (perianal and gluteal area)
3	24	Yes	Daily PrEP use	Erythematous patches and plaques with scaling and alopecia, disseminated pustules (pubogenital area, lower belly, arms)
4	33	Yes	Daily PrEP use	Erythematous plaques and pustules (beard area), erythematous scaling plaques (gluteal area)
5	28	Yes	Daily PrEP use	Deep infiltrated erythematous patches and plaques with pustules (pubogenital area, trunk), some pustules and alopecia (beard area)
6	34	Yes	Daily PrEP use	Erythematous marginally infiltrated plaques with squamae (lower belly, inguinal area, penis)

Abbreviations: MSM, men who have sex with men; n.i., no information; PrEP, HIV pre-exposure prophylaxis; VL, viral load.



Abstract N°: 2964**A rare case of oral condyloma lata as the only manifestation of secondary syphilis: the great imitator is coming back.**Halim Halim^{*1}¹Suez canal university, faculty of medicine, Dermatology, Venereology & Andrology, Ismailia, Egypt**Introduction & Objectives:**

Syphilis was eradicated in developed countries in the 1950s, and the discovery of penicillin resulted in a major drop in the disease's incidence. However, a return of the disease has been documented in recent years. The rising incidence of syphilis cases is linked to high-risk sexual behaviour, coinciding with the new era of human immunodeficiency virus (HIV) infection.

Secondary syphilis affects up to 25% of untreated individuals, manifesting as a classic maculopapular rash, alopecia, and condyloma lata in the anogenital area as grey or white, moist, verrucous papules or plaques. The oral cavity and intertriginous areas such as the umbilicus, axilla, inframammary folds, and toe web gaps are examples of extragenital locations.

We report the case of an Egyptian male whose diagnosis of syphilis was based on the presence of an unusual oral mass. This case is noteworthy because, while the spectrum of syphilis varies depending on the stage of the patient's presentation, the development of exclusively oral lesions is a rarely documented event in the literature.

Materials & Methods:

A 29-year-old unmarried male patient presented with an abnormal fleshy mass involving his palate for 2 months. The lesion originated as a single papule on the soft palate and grew in size over time. The patient ignored it until about a month ago, when he experienced a weird sensation while swallowing food. He sought medical advice and was treated with antifungal drugs and topical corticosteroids, but he did not improve.

The patient described several unprotected sexual relationships with numerous partners in the four months preceding the development of his oral tumour. A check of his medical history revealed an asymptomatic ulcerative lesion on the glans penis that had occurred three months before and spontaneously vanished after two weeks, leaving post-inflammatory hyperpigmentation. Furthermore, he stated that the emergence of oral lesions was accompanied by a slight fever, pharyngitis, dysphagia, and general malaise.

Physical exam revealed three groups of well-defined, broad grayish-white, large, nonulcerated verruciform, fleshy plaques with focal erythema involving the uvula, tonsils, soft, and hard palate. No lymphadenopathy or cutaneous lesions were observed during the physical examination.

Results:

Routine laboratory investigations revealed that the results were within normal standards.

The serologic tests for rapid plasma reagin (RPR), Venereal disease research laboratory (VDRL), fluorescence treponemal antibody absorption (FTA-ABS), and hemagglutination TPHA confirmatory tests were all positive.

Antibodies against human immunodeficiency virus (HIV), HBsAg, and HCV antibodies were all negative. Gram-stained throat swab was negative for oral gonococci.

Based on clinical and laboratory data, the patient was diagnosed with secondary syphilis with oral condyloma lata.

The patient was treated with intramuscular benzathine penicillin G (2.4 million units in a single dose). The patient experienced dramatic improvement after 2 weeks of injection.

Conclusion:

Cases of syphilis presenting with solitary oral lesions are uncommon and pose a diagnostic challenge. Clinicians dealing with subacute oral lesions should be aware of the likelihood of this contagious, treatable, and occasionally severe disease. Early detection of such instances is critical to reducing syphilis transmission and its consequences.

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Abstract N°: 3029**A retrospective analysis of the risk of developing high-grade anal intraepithelial neoplasia in men who have sex with men and living with human immunodeficiency virus.**

Rosa Adelaida Feltes Ochoa¹, Elena Sendagorta Cudós¹, Mario Alvarez Gallego², Tristán Sobral Costas¹, Rafael Escudero Tornero¹, Mariana Díaz Almirón³, Pedro Herranz Pinto¹

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Introduction & Objectives:

Anal intraepithelial neoplasia (AIN), also known as squamous intraepithelial lesion (SIL), is the cytopathological alteration of the transitional squamous epithelium of the anus. It is caused by the human papillomavirus (HPV), and is classified according to the involvement of the epithelium into 2 categories: low-grade SIL (LSIL) and high-grade SIL (HSIL). LSIL reflects transient and productive HPV infection, whereas HSIL represents persistent infection, and therefore a precancerous lesion. Patients living with human immunodeficiency virus (HIV), particularly men who have sex with men (MSM), have a high incidence rate of HSIL and anal cancer. Early detection and treatment of HSIL in those patients decreases the risk of developing anal cancer. We aim to describe a cohort of MSM living with HIV and the risk of developing HSIL.

Materials & Methods:

An observational, retrospective, single-center study was conducted. We included MSM living with HIV, under follow-up in a monographic consultation for early detection of anal cancer in a tertiary hospital. Patient with previous HSIL diagnosis were excluded. All patients underwent High-resolution anoscopy (HRA).

Results:

Data were collected from 94 patients, with a mean age of 39 years and a mean follow-up time of 3.9 ± 9.6 years. HPV positivity was found in 95% of the patients, and high-risk HPV was present in 87% of them. Condylomas or LSIL were present in 47% of the patients. During follow-up, 35 of the patients were diagnosed with HSIL (37.2 per 100,000 patient-years). No patients developed anal cancer during follow-up. **Conclusion**

More than one third of MSM living with HIV in the present cohort with normal HRA or previous diagnosis of LSIL/condyloma developed, within a mean time of 2 years, lesions compatible with HSIL. The use of tobacco, alcohol and the presence of HPV 31 were associated with the appearance of these lesions.

Abstract N°: 3113**Mpox and human immunodeficiency virus infection: clinical and epidemiological findings in a retrospective study of 58 cases.**

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Introduction & Objectives:

The most recent Mpox outbreak is mostly affecting men who have sex with men (MSM) with a high prevalence among human immunodeficiency virus (HIV) carriers. The role HIV plays on Mpox severity is still not clear. Our aim is to describe and compare clinical and epidemiological characteristics of Mpox cases, regarding HIV status, in the 2022 outbreak.

Materials & Methods:

We present a retrospective analysis of confirmed Mpox cases with their clinical, epidemiological and laboratory characteristics, in a Dermatology Department, in Lisbon, Portugal, comparing people living with HIV against patients with HIV negative status. T-test or Fisher's exact test was used according to the variable. All tests were performed for a confidence level of 95%.

Results:

In total, 58 patients were included, all men, 88% men who have sex with men. Of the 58 patients, 25 (43,1%) were people living with HIV, and 48% (n=28) had a diagnosis of an sexually transmitted infection in the past (excluding HIV). All patients presented mucosal or/and cutaneous lesions. The prevalence of genital, perianal, perioral lesions, and lesions at sites other than these, were overall similar between the two groups. The frequency of constitutional symptoms (fever, myalgias/arthralgias, and headache) and lymph node enlargement was similar in both groups, with no significant differences. Regarding laboratory parameters (red cell count, white cell count, renal function, liver function, and c-reactive protein) there was no significant difference between groups. Of the 58 patients 32,7% had other sexually transmitted diseases upon screening, mainly syphilis (25.9%).

Conclusion:

This retrospective transversal analysis suggests people living with HIV are not prone to higher Mpox disease severity; thus supporting the fact that HIV infection could be a surrogate marker for increased sexual risk behavior, which is a recognized risk factor for acquiring monkeypox, rather than a risk factor itself.

Abstract N°: 3232**Self-testing technology for sexually transmitted diseases – a qualitative evaluation**

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Introduction & Objectives:

Chlamydia incidences remain high worldwide and is considered a global public health problem. However, testing rates among young sexually active people remain low. Feelings of embarrassment and stigma are well-known deterrents to sexually transmitted infection testing and should be considered when developing new technologies to increase testing up-take. Digital technologies can support accessibility to healthcare and meet challenges such as lack of staff. Thus, we have designed and developed a self-testing technology that allow patients to be tested at a sexual health clinic through self-collected sampling without a face-to-face consultation. The aim of this study was to pilot test the self-testing technology in clinical practice and to investigate the experiences of patients who have completed a self-test.

Materials & Methods:

A qualitative approach was applied and participant observation of 10 patients while using the self-testing technology and 10 semi-structured interviews with patients after the use of the self-test technology were conducted.

Results:

Patients' experienced high sense of security using the self-testing technology. Taking the test at one's own pace in a private setting and avoiding "judgmental looks" hindered an awkward situation. Patients did not feel the need to address a healthcare professional during the test, quite the reverse; they experienced anonymity and discretion, which was emphasized as important during the self-test. Furthermore, they experienced the self-testing technology as easy to use and as a flexible solution.

Conclusion:

The self-testing technology may have the potential to increase testing up-take as it takes into account some of the barriers that exist. A more simplified and increased accessibility of chlamydia testing by the self-test technology proved feasible. The pilot test and evaluation has resulted in a fully functioning implementation of the self-testing technology in clinical practice.

Abstract N°: 3337**Localized papulonodular secondary syphilis: a thought-provoking diagnosis**Cláudia Brazão¹, Dora Mancha¹, Lanyu Sun¹, João Borges-Costa¹, Luís Soares-de-Almeida¹, Paulo Filipe¹¹Centro Hospitalar Universitário Lisboa Norte, Dermatology Department, Lisbon, Portugal**Introduction:**

Syphilis is a sexually transmitted infection (STI) caused by *Treponema pallidum* bacteria. The natural history of this disease has alternating periods of activity with clinical, immunologic, and histopathologic distinct characteristics (primary, secondary, and tertiary syphilis) and latency periods (latent syphilis).

Case Report:

A 56-year-old Caucasian female, Fitzpatrick's phototype III, with no relevant comorbidities, presented to our dermatology emergency department with a one-month history of asymptomatic brown lesions on her abdomen, with no other symptoms. She revealed unprotected sexual intercourse with 3 male partners in the previous 6 months. On physical examination, there were numerous firm violaceous-to-brown well-delimited papules and nodules, symmetrically distributed on the lower abdomen and inguinal regions. STI screening revealed a positive rapid plasma reagin titer, positive *Treponema pallidum* particle agglutination assay, and a reactive Venereal Disease Research Laboratory (VDRL) test (1: 64 dil). Skin biopsies showed epidermal hyperplasia and a plasma cell rich inflammatory infiltrate, involving the papillary and reticular dermis. Immunohistochemical studies using antibodies to treponemal antigens identified spirochetes in the skin biopsy. A diagnosis of localized papulonodular secondary syphilis was made. The patient was treated with three consecutive weekly doses of 2.4 million units of benzathine penicillin intramuscular injections, with no side effects. Within 3 weeks, clinical resolution was observed, and a threefold decrease in the VDRL titer was documented 6 months after treatment.

Discussion:

The clinical diagnosis of secondary syphilis is challenging, with a florid presentation. Several clinical variants have been described, including papular, follicular, vesicular, corymbiform, psoriasiform, nodular, annular, and pustular. Secondary papulonodular syphilis is rare, with only a few dozen cases described in the literature over the past 30 years. Of those, the majority occurred in HIV-positive patients. The etiopathogenesis of nodular syphilis remains unclear, but it may correspond to late-stage secondary syphilis before the transition to tertiary syphilis, or it may result from a hypersensitivity reaction to the infection by *Treponema pallidum*. We present a unique case of localized papulonodular syphilis that highlights that syphilis should always be kept in mind as a great mimicker of numerous cutaneous skin diseases. A thorough clinical history with sexually transmitted disease screening should always be undertaken when facing uncharacteristic dermatoses, especially considering the alarming increase in sexually transmitted infections.

Abstract N°: 3625
Secondary syphilis on red tattoos

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Introduction & Objectives:

We present a case of secondary syphilis in a 42-year-old female patient who presented with diffuse papulonodular cutaneous rash, specifically demarcated in areas of red tattoo. Syphilis is a sexually transmitted disease caused by *Treponema pallidum*, which can manifest clinically in various ways, including skin lesions. Although syphilis is relatively common, the presence of marked and well-defined lesions in tattooed areas is a semiological sign that has been underreported in recent decades and should be considered in the diagnosis of the disease.

Materials & Methods:

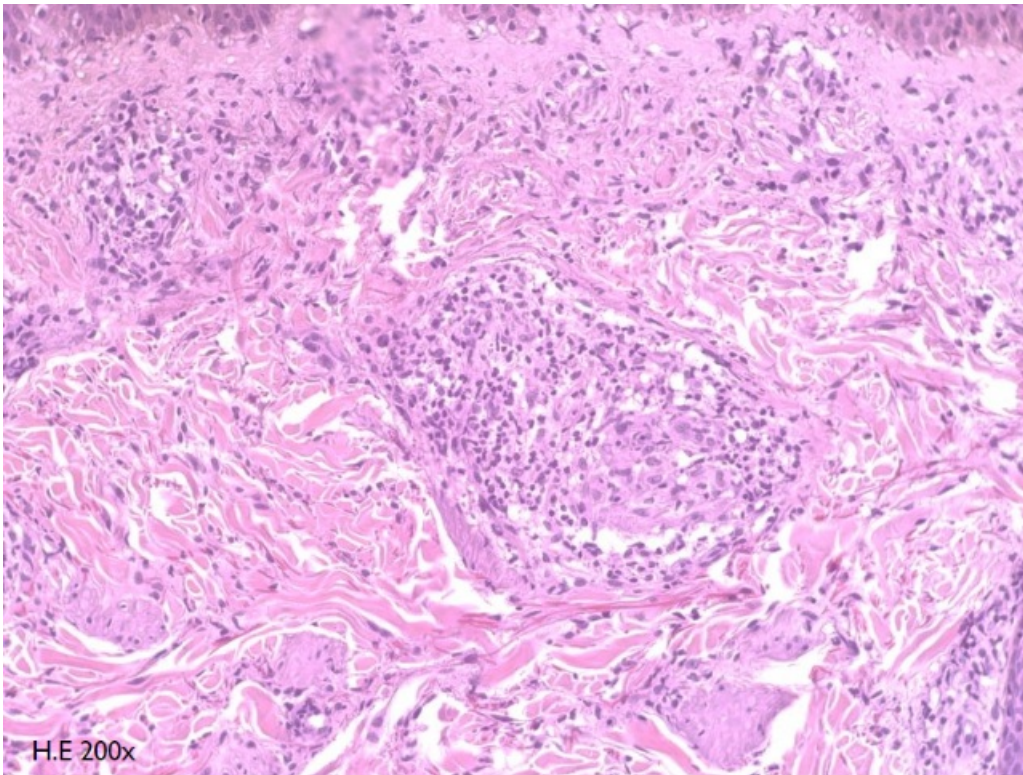
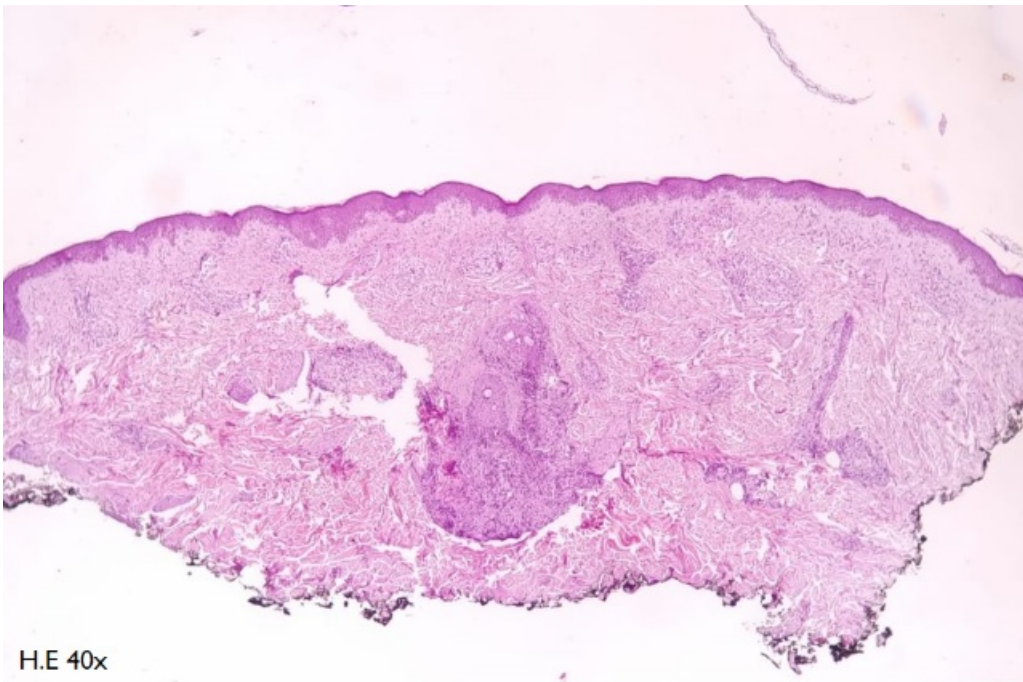
The patient, who had no comorbidities, was evaluated at the dermatology outpatient clinic through clinical, laboratory (VDRL and FTA-ABs) and histopathological examinations. Physical examination revealed a papulonodular rash that had developed two months prior, with lesions present on the face, neck, abdomen, trunk, and extremities. The patient had experienced fever and hoarseness. Cervical lymph node enlargement was present. In particular, there was pronounced erythema and scaling in three red tattoos: one on the left breast and the other two on the extensor portion of both forearms. The tattoos had been made more than five years before the onset of the clinical symptoms. Another red tattoo, which was done by another tattoo artist, located on the left abdominal flank, did not present exacerbated erythema or scaling. Due to this curious demarcation in the tattoos, we investigated the relationship between secondary syphilis and tattoos in the literature.

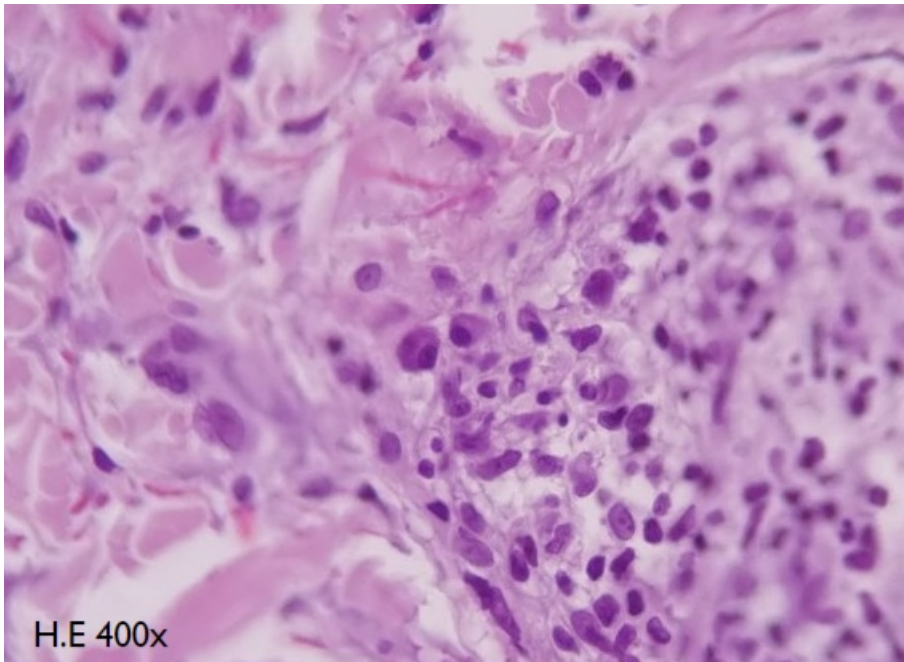
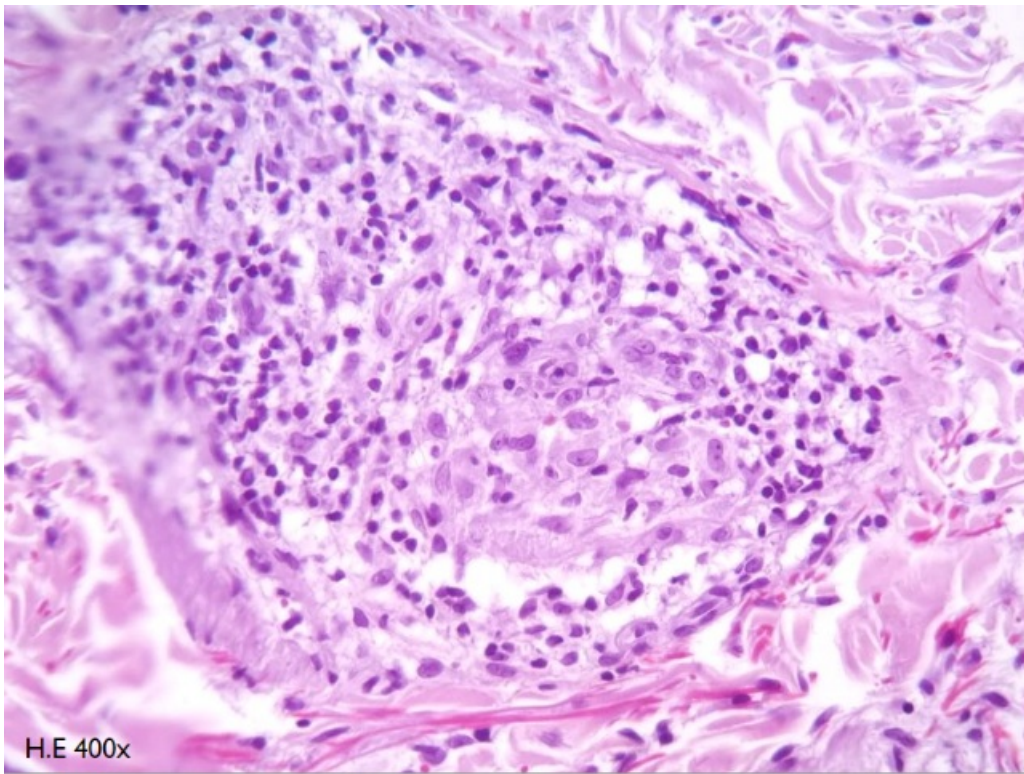
Results:

The diagnosis of syphilis was confirmed by VDRL (1:4) and FTA-Abs IgM positivity. The biopsy revealed preserved epidermis and an infiltrate of plasma cells and histiocytes in the dermis, which is consistent with secondary syphilis. The patient was treated with Penicillin G Benzathine and evolved with clinical improvement, with post-inflammatory hyperchromia remaining in the topography of the lesions. The presence of secondary syphilis lesions over tattoos was first reported in 1898 by Rona. This finding was soon reinforced by similar reports from Zechmeister in 1901 and Wechselmann in 1905. Lipschütz, in 1906, suggested that the chronic inflammation caused by tattoos could lead to a diminished local antibacterial response, a phenomenon he called locus minoris resistentia. Therefore, the discussion of semiological findings in tattoos in secondary syphilis has been present since the beginning of the 20th century. However, Long's review shows that little has been said about this clinical sign in the last 70 years. We found a case described in 2010 and another in 2019, but nothing after the last one that Long highlights in his work, published in 1989 and the previous one in 1952. The present case involved a patient with four red tattoos, and syphilis was present in three of them.

Conclusion:

The mechanisms underlying this phenomenon are unknown. We postulate that the alteration of the inflammatory response profile mediated by the tattoo may play a significant role in this process. This case highlights a semiological sign rarely reported in recent decades and which should be considered in cases of clinical suspicion of secondary syphilis.





Abstract N°: 3793**Anogenital warts in children: sexual abuse or not ?**Halim Halim*¹¹Suez canal university, faculty of medicine, Dermatology, Venereology & Andrology, Ismailia, Egypt**Introduction & Objectives:**

- Anogenital warts (AGW) are nonmalignant cutaneous neoplasms produced by the human papillomavirus (HPV). With 9 to 13% of the world's population affected, HPV is the most common sexually transmitted disease.
- It's a common scenario for dermatologists: a small child arrives at the clinic with his or her parents, complaining of genital warts. You make the diagnosis, discuss how they might be managed, and then comes the inevitable but unavoidable question: how were they acquired?
- Because HPV is carcinogenic, early identification of genital warts is critical. The genital forms of HPV are classified as high-risk or low-risk based on their ability to produce anogenital neoplasms.

Materials & Methods:

- In this presentation, we will show our approach for children presented with AGW in addition to exploring in depth the role of the HPV vaccine in preventing HPV-related diseases and the different methods of treatment in this age group.
- The diagnosis of a sexually transmitted infection in a child presents a unique diagnostic challenge: Is the HPV infection a result of child sexual abuse or acquired through another mechanism?
- Proper evaluation should include interviewing primary caregivers and the child, monitoring child behaviour, a thorough physical examination of the child, and screening for other sexually transmitted infections.

Results:

Anogenital warts in a child do not always indicate sexual abuse, and the older the child, the more likely it is that the AGW has resulted from sexual abuse. Most AGW in young children do not need to be treated because they resolve spontaneously within 1-2 years.

Conclusion:

- It remains very difficult, if not impossible, to assess with certainty the source of HPV contamination in children with AGW, and families should be counselled that regardless of treatment, recurrence is common.
- Prophylactic HPV vaccination is a powerful strategy to reduce and eradicate HPV-related diseases and cervical cancer. Long-term studies have demonstrated impressive efficacy, immunogenicity, and safety results.



Abstract N°: 4104
Syphilis, an obscure cause of balanitis.

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Introduction & Objectives:

Syphilitic balanitis of Follmann (SBF) is a rare manifestation of primary syphilis that was first described in 1948. It typically presents with signs and symptoms of unexplained balanitis with or without chancre. The diagnosis of SBF is confirmed by the finding of *Treponema pallidum* in the lesions and/or by positive syphilis serology.

Materials & Methods:

We retrospectively identified nine challenging cases of SBF and syphilitic phimosis managed by our service which were not immediately recognized as syphilis. We analyzed all the relevant information from their records (Table 1).

Results:

All patients were male (100%) with a median age of 47 years, of which four (44%) were men who have sex with men (MSM). The majority of patient (78%) were sexually active within the last 3 months. Two patients (22%) reported last sexual activity to be one to two years ago.

In our case series, the clinical appearance of SBF shows a heterogeneous spectrum varying from painful erythema to superficial erosive balanitis and even to painless induration of the glans and phimosis. The patient with the longest clinical evolution reported the presence of the disease for 1 year. In other cases, the clinical picture ranged from 3 days to 12 weeks of evolution.

All patient had positive specific treponemal tests and a positive RPR, with variable titrations from 1:2 to 1:512. Five patients had also a *Treponema pallidum* PCR swab taken from the affected area. In all five cases (100%) this was positive.

Four patients (44%) underwent circumcision due to phimosis. The diagnosis in these cases was made initially by the histopathological report which was suggestive of syphilis. In the remaining cases, two patients were treated initially for genital herpes, two patients for candida balanitis, and one patient presented as neurosyphilis with ocular manifestations and hearing impairment.

The majority of patients (78%) were treated with a single dose of 2,400,000 IU of benzathine penicillin G or doxycycline 100mg twice daily for 14 days following national guidelines for primary syphilis. There were no records of recurrent or persistent symptoms after treatment on follow up visits.

Conclusion:

Changing sexual trends, coupled by the introduction of PREP, have lead to a continuous increase in reported cases

of syphilis infection among EU/EEA countries. In contrast, SBF has rarely been described in literature. It is reasonable to postulate that the limited number of reports on SBF is likely due to under reporting and lack of recognition. The non-specific features of SBF, can lead to misdiagnoses, treatment delays and failure to prevent onward transmission. The true prevalence of this condition is unclear. However, we argue that screening for syphilis needs to be considered in all cases of unexplained balanoposthitis or phimosis, especially before surgical intervention, even if the sexual history is not suggestive.

Table 1 Synopsis of clinical and laboratory data

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Age	LSI	MSM	Genital manifestations	Enlarged inguinal LN	Other syphilis manifestations	Biopsy	TP-PCR	CMIA and TPPA/TPHA	RPR titer	HIV 1/2 serology	HSV-PCR	Treatment
25	3m	Yes	Erythematous patches, dry scaly glans, pruritus	U	No	Not done	Positive	Positive	1:2	Negative	Negative	Initial management: Clotrimazole cream BenPen, single dose
28	2m	No	Phimosis and glans erythema with red papules, whitish patches, fissuring, pruritus	Bilateral	No	Not done	Positive	Positive	1:64	Not done	Negative	Initial management: Clotrimazole cream & Fluconazole 150mg, single dose BenPen single dose
32	<3m	Yes	Tight foreskin, painless lump on frenulum after self-resolved ulcer 1 year before	U	No	Yes	Not done	Positive	1:64	U	Not done	Initial management: Circumcision BenPen, single dose
34	2m	Yes	Erythema and flaking of the prepuce with presence of a small ulcer and a fissure, blotchy erythema of the glans	Bilateral	Ocular syphilis Orosyphilis	Not done	Positive	Positive	1:512	Negative	Negative	Procaine penicillin & Probenecid for 14d & Prednisolone for 10d BenPen, single dose
47	3m	Yes	Superficial erosions on an erythematous base	U	No	Not done	Positive	Positive	1:8	Positive	Negative	Initial management: Aciclovir BenPen, single dose
55	3m	No	Phimosis and painless induration	Left side	Secondary syphilis rash presented soon after genital symptoms and reoccurred five months after resolution	Yes	Not done	Positive	1:32	Negative	Not done	Initial management: Circumcision BenPen, single dose
58	2m	No	Phimosis, local oedema splitting of the skin and exudate	Yes	No	Not done	Positive	Positive	1:32	Negative	Positive for HSV 1	Initial management: Doxycycline & Aciclovir BenPen, single dose
63	2y	No	Erythematous rash on glans not responding to topical treatment	U	No	Yes	Not done	Positive	1:32	Negative	Not done	Initial management: Circumcision and glans biopsy Doxycycline for 28d
71	1y	No	Blistering ulcerations of the inner foreskin with subsequent phimosis	No	Secondary syphilis rash 7 weeks after initiation of genital symptoms	Yes	Not done	Positive	1:32	Negative	Not done	Initial management: Hospitalization for IV antibiotics for 3d Circumcision Doxycycline for 14d

LSI, last sexual intercourse; LN, lymph nodes; TP, Treponema pallidum; HSV, herpes simplex virus; BenPen, benzathine penicillin G 2,400,000 IU; m, month; y, year; d, days; U, unknown; IV, intravenous.



Abstract N°: 4227

Some indicators of syphilis in Ukraine for the period 2017-2021

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Introduction & Objectives: Approximately 6 million patients with syphilis are registered each year globally. Syphilis remains an urgent medical and social problem in connection with the presence of patients with damage to the nervous and cardiovascular systems, internal organs (liver, lungs, kidneys, spleen, stomach), musculoskeletal system, infection of newborns.

Materials & Methods: The purpose of our research was to study the clinical and epidemiological situation with the incidence of syphilis in Ukraine from 2017-2021 and to identify possible patterns. The results of own retrospective cohort study and data from State institution "Center of Medical Statistics of the Ministry of Health" were used.

Results: We have analyzed statistical data on the incidence of syphilis in Ukraine before Russia's full-scale invasion and war of aggression against Ukraine for the period 2017-2021. A total of 10,923 (A50-53) cases of syphilis was registered in Ukraine, excluding the occupied Autonomous Republic of Crimea and parts of Donetsk and Lugansk regions. Early syphilis (A51) was diagnosed in 7468 (68%) cases, early latent syphilis (A51.5) in 4326 (58%) cases, late forms of syphilis (A52) in 1643 (15%) cases, other and unspecified forms of syphilis (A53)-1812(17%). By gender, the distribution was as follows: 6184 cases among men (57%) and 4739 (43%) cases among women. The incidence of syphilis decreased by 45% over the period 2017-2021 from 2768 to 1540 cases respectively, the incidence of early syphilis decreased by 50% from 2035 to 1016 cases, latent early syphilis from 1215 to 463 cases - by 62%, the incidence of unspecified forms of syphilis almost unchanged - 360 cases in 2017 and 341 cases in 2021. Syphilis infection was diagnosed by a dermatovenereologists in 60% of cases. Gynecologists, urologists, neuropathologists, pediatricians, physicians diagnosed syphilis in other cases.

Conclusion: The incidence of all forms of syphilis, with the exception of other and unspecified forms, has a stable tendency to a constant decrease. There is a gender feature - the incidence of syphilis among men significantly prevails over the incidence among women in all nosological forms. Doctors of different specialties should be aware of syphilis and its variable symptoms.

Abstract N°: 4920**Knowledge, awareness, and attitude amongst first year MBBS students about STIs other than HIV in a tertiary care hospital**

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Introduction & Objectives: Sexually transmitted infections (STIs) resulting from unprotected sexual activity have increased among adolescents and young adults. These STIs have terrible effects on the capacity to reproduce, perinatal infection rates and incidence of genital cancers. This study was conducted to assess the level of knowledge about the clinical features suggestive of STIs with special emphasis on non-HIV STIs.

Materials & Methods: A cross sectional study was conducted among college students between the age group of 18-22 years. A total of 300 students were included in the study, in first year of MBBS. A questionnaire was given to the student and were only asked to mention their age and place. Based on the questionnaire knowledge, awareness and attitude of the students were assessed about other non-HIV STIs.

Results: 300 students participated in the study of which 170 were males (55.6%) and 133 were females (44.3%). 298 students had heard about STIs, and 260 students had heard about STIs other than HIV. 99 % knew about HIV and 64% students knew about STIs other than HIV. Teachers, doctors and the hospital, internet, newspapers, and magazines were the major sources of information. Students were well aware about the causative factors (bacterial, viral & fungal infections , multiple sexual partners, unprotected sex , sex outside marriage , premarital sex, alcohol and drug abuse and sex during menstruation) , mode of transmission (sharing the infected needle, not using condoms prostitution, mother to child transmission during childbirth and poor hygiene, kissing , common toilet use, mosquito bites , shaking hands and sharing towel) and symptoms of STI (fever on and off, vaginal/urethral discharge, genital ulcer, abdominal pain, swelling in the groin and pain while passing urine) .However only 47% students were aware about the various complications of STIs. The attitude of students towards sexual practices was vague.

Conclusion: From the study it can be concluded that students had a good knowledge about the other STIs, however there was a lack of knowledge about the complications of the STIs and there were certain misconceptions about the sexual practices especially with the usage of emergency contraceptives. The studies previously conducted have been done amongst school going children and college students from non-medical background. So, this study was conducted.

Abstract N°: 5135**Getting the diagnosis on the nose: a case of tertiary syphilis**Holly Fitzgerald¹, Nicholas Laidler¹, Graham Thom¹¹Royal Perth Hospital, Dermatology, Australia**Introduction & Objectives:**

Syphilis, a sexually transmitted infection caused by the bacterium *Treponema Pallidum*, typically manifests in three stages, beginning with a chancre at the site of inoculation. Left untreated, progression to a secondary stage can occur, where a variety of constitutional symptoms and rashes may be seen. Tertiary syphilis may then develop, most commonly with cardiovascular, gummatous or CNS involvement. We report a rare case of tertiary syphilis with cutaneous and neurological manifestations in Western Australia.

Materials & Methods:

A 55-year-old man was referred to Dermatology clinic with a recurring and locally destructive nasal lesion. Two years prior, a small right sided nasal papule had appeared, which was locally erosive. Later, similar ulcerated lesions around the nasal tip and the superior part of the columella developed, extending to the inside of the soft triangle on the left side. Two biopsies taken a year apart were non-diagnostic. There was no other relevant past medical or dermatological history disclosed at this time. Examination revealed an erosive lesion to bilateral nostrils and septum. There was tissue loss from the superior aspect of the nostrils and columella, extending posteriorly to the level of the middle turbinate. The base of the lesion was copper red in colour, with a punched-out appearance and scalloped borders. Binocular diplopia on left gaze and reduced visual acuity to the left were seen on neurological exam. A broad differential diagnosis was considered which included atypical bacterial or deep fungal infections, trigeminal trophic syndrome, ulcerating basal cell carcinoma, granulomatosis with polyangiitis, leprosy, extranodal lymphoma, orofacial tuberculosis, tertiary syphilis, yaws, paracoccidioidomycosis, and rhinoscleroma. Investigations included autoimmune and vasculitic blood screens, syphilis serology, MRI of the brain and repeat biopsy for culture and histopathology.

Results:

The above tests revealed positive syphilis serology, with *T. pallidum* particle agglutination assay (TPPA) of 3+ and, rapid plasma regain of 128, reflective of active and infectious syphilis. Cerebrospinal fluid also had positive TPPA (1:160). MRI of the brain demonstrated minimal thickening and enhancement of the nasal apex, however no abnormal enhancement was seen elsewhere. These findings were consistent with a diagnosis of tertiary cutaneous and neurologic syphilis. On subsequent history, the patient was discovered to be a known syphilis contact 3 years earlier who had not received post-exposure prophylaxis. He was then managed with IV benzylpenicillin for 15 days and nasal reconstruction.

Conclusion:

Western Australia is experiencing a syphilis outbreak, with a nine-fold increase in yearly diagnoses since 2014, in line with rising global numbers. Owing to the use of antibiotics along with local outbreak response teams, tertiary syphilis is still rarely seen. However, clinicians working in areas which have previously seen low levels of syphilis should remain vigilant to this uncommon and clinically variable disease, which may present in later stages without obvious primary or secondary manifestations.

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Abstract N°: 6272**Features of the neurological status in patients with latent late syphilis**

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Introduction & Objectives: Syphilis remains one of the most important medical and social problem in many countries. *T.pallidum* is a “neurotropic” infection that can be detected in nerve tissue already in the early stages of the disease. With systemic spread, *T.pallidum* can affect various body systems, influencing the clinical course of the disease.

The aim of the of the work is to analyze the occurrence of neurological, vascular and other disorders in patients with late syphilis in Ukraine.

Materials & Methods: The research group included 130 patients with late syphilis (56 men, 74 women). A therapist and a psychoneurologist were involved in detailing and evaluating intercurrent diseases

Serological markers of *Treponema pallidum* were diagnosed by non-treponemal tests, rapid plasma reagent tests, and treponemal tests (immunoenzyme, passive hemagglutination reaction, immunofluorescence reaction.

Results: 98% of patients with late syphilis had complaints that are characteristic of the presence of vascular disorders: headache (63%), not associated with increased blood pressure; memory impairment (17%), associated with difficulties in focusing attention, which led to a decrease in short-term memory and mechanical memory, while maintaining logical memory; sleep disturbances (23%) - in the examined patients, they were more often due to increased lability, noted mainly in women (75%); depression (17%) – also noted mainly in women (80%); anxiety (21.5%) - noted mainly in women with depression. Neurological disorders were found in 68% of patients: encephalopathy - in 34%, astheno-neurotic syndrome - in 29%, cognitive disorders - in 7.7%, schizophrenia - in 1 woman. The presence of vascular disorders and neurological pathology does not exclude the specificity of damage to the nervous system.

Conclusion: The obtained results demonstrate that for the early detection of late syphilis and early forms of neurosyphilis, it is necessary to examine patients in therapeutic, neurological and psychoneurological hospitals using treponemal tests for syphilis.



Abstract N°: 6335**Prozone phenomenon in a syphilis patient**

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Introduction & Objectives:

Syphilis is a systemic infection caused by *Treponema pallidum*, a spirochete bacterium that is transmitted primarily through sexual activity. Cases of syphilis have risen substantially in recent years. Chronic disease can result in significant morbidity, potentially affecting nearly every organ system. Accurate diagnosis of syphilis is critical to prevent spread of infection, reduce complications associated with infection during pregnancy, and minimise long-term sequelae. Serologic testing for syphilis involves the use of two types of serologic tests - treponemal and nontreponemal. Use of only one type of serologic test is insufficient for diagnosis since each test used alone has major limitations, including false - positive and false - negative results.

Materials & Methods:

A 49-year-old man presented with a large firm ulcerated lesion on the penis. The genital lesion developed a month ago and was not accompanied by pain or discomfort. The patient reported a recent appearance of non-pruritic generalized body rash. Upon investigation, a disseminated copper - colored papules and macules were noted with circular scaling edge (outward direction) on palms and soles. Rapid Plasma Reagin (RPR) test, *Treponema pallidum* haemagglutination (TPHA) test and HIV test were performed.

Results:

The patient demonstrated clinical signs of primary and secondary syphilis. Initial RPR testing was negative. However, further serum dilutions demonstrated positive results. TPHA testing was also positive. HIV test was negative. Therapy with parenteral penicillin G was initiated.

Conclusion:

Following the inoculation of *T. pallidum* at the entry site, organisms proliferate, sensitize lymphocytes, and activate macrophages, causing the formation of a primary lesion or "chancre" at the site of inoculation. Chancres progress from a papule to an ulcer, which is typically painless, round to oval, indurated, well-circumscribed, with a clean base and heaped up margins. Bielt's sign (collarette of scales) on the palms and soles is considered to be a strong indicator of secondary syphilis and clinically distinguishes it from other papulosquamous conditions. In fewer than 10% of cases, primary and secondary stages may overlap. False-negative reactions infrequently occur with nontreponemal testing due to the "prozone effect". The prozone effect occurs when very high serum antibodies supersaturate the antigens used in the nontreponemal assay, thereby interfering with the antigen-antibody lattice network needed to visualize a flocculation reaction. The phenomenon occurs in less than 2% of cases of syphilis. This false-negative reaction is most likely to occur in patients with secondary syphilis and HIV infection. If clinical suspicion of secondary syphilis is high and the nontreponemal testing is negative, the clinician should alert the laboratory of a suspected prozone effect, and the laboratory should reevaluate the clinical sample after further diluting the serum.

Abstract N°: 6384**Lymphogranuloma venereum (LGV) in a heterosexual male patient**Thomas Fotas¹, Eva Tsele¹¹General Hospital "Asklepieio Voulas", Dermatology and Venereology, Voula - Athens, Greece

Lymphogranuloma venereum in a heterosexual male patient

Introduction & Objectives:

Lymphogranuloma venereum is a sexually transmitted disease due to the intracellular bacterium *Chlamydia trachomatis* L1, L2 and L3. The aim was to present a case of a male patient with Lymphogranuloma venereum after a heterosexual encounter.

Materials & Methods:

A patient, male, aged 34, presented with left painful inguinal enlargement since 20 days associated with fever. Antibiotics were administered and surgery was contemplated. However, a lower abdominal CT scan was negative for the presence of a mass and detected enlarged lymph nodes in the left inguinal area. Dermatological evaluation and clinical examination revealed a red enlarged mass with an area oozing fluid. In close contact with the lesion the groove sign was observed. A detailed history led to the patient revealing that he had sexual encounter with a female of Afro-American origin. Thereafter a lesion appeared in the penis which was healed and was followed by inguinal enlargement.

Results:

Fluid was taken from the oozing area in the enlarged inguinal lymph node. The DFA test was positive for the presence of chlamydia. A PCR test was positive for the presence of chlamydia which were also detected in a urine test. The presence of *Chlamydia trachomatis* L2 was observed. Laboratory evaluation was negative for other infectious diseases. Lymphogranuloma venereum was diagnosed and doxycycline 100 mg twice daily was administered for 21 days.

Conclusion:

Lymphogranuloma venereum is a sexually transmitted infectious disease due to the intracellular bacterium *Chlamydia trachomatis* L1, L2 and L3. Cases in Europe and the United Kingdom were rare. However, during the recent decade cases of proctitis in men were observed, sometimes in relationship with HIV or hepatitis C. Clinically it presents in 3 stages. Stage 1 where ulcers are observed. Stage 2 with painful inguinal lymphadenopathy and the groove sign. Stage 3 in chronic infection fibrosis and lymph node obstruction may lead to genital lymphedema. Diagnosis is performed by *Chlamydia trachomatis* detection by NAATs and PCR. Treatment is performed by doxycycline administration, and if necessary erythromycin or azithromycin.

Abstract N°: 6409
Biologic Therapies in HIV-infected Patients with Psoriasis: Comparing Efficacy of Treatments

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Introduction & Objectives:

Psoriasis is the most common skin disease in HIV-infected individuals. These patients often present with severe and treatment-refractory forms of the disease necessitating the need for biologics. However, safety and efficacy data on the use of biologics in HIV patients is limited as this patient population is often excluded from clinical trials. While past reviews have studied the safety of biologics in treating psoriasis in HIV patients, none have compared the efficacy of different available biological agents. This systematic review of HIV patients with psoriasis treated with biologics aims to compare the cutaneous responses to various biological therapies in published cases.

Materials & Methods:

Following PRISMA criteria, a MEDLINE and Embase OVID search was conducted on April 22, 2023, using synonyms of the keywords "Human Immunodeficiency virus", "Psoriasis" and "Biologic". Articles pertaining to psoriatic arthritis and AIDS were omitted. After screening 2130 articles, 111 patients from 33 studies were included. The mean patient age was 48.1 ± 9.9 years. There were 102 males (91.9%) and 8 females (7.2%); sex was unspecified for 1 patient (0.9%). Plaque psoriasis was the most common type of psoriasis and was reported in 61% of cases. The mean duration of psoriatic disease was 15.1 ± 10.8 years. Prior biologic treatment failure was reported for etanercept (8), adalimumab (8) and ustekinumab (2).

Results:

A total of 111 patient cases of systemic biologic use with reported outcomes were documented; etanercept was the most frequently used biologic (36/111, 32.4%), followed by ustekinumab (27/111, 24.3%), adalimumab (17/111, 15.3%), secukinumab (13/111, 11.7%), and risankizumab (10/111, 9.0%). 102 (91.9%) patients were on highly active antiretroviral therapy during treatment. Skin outcomes were reported using the reduction in the Psoriasis Area and Severity Index (PASI) score. The mean pre-treatment PASI was 18.7. The PASI improved in all 111 patient cases (100%) post-treatment. Of the cases that reported PASI outcomes, PASI 50, PASI 75, PASI 90 and PASI 100 were reached in 100% (94/94), 95.8% (92/96), 81.9% (68/83), and 56.6% (47/83) of patients, respectively. The most efficacious biologic therapies resulting in PASI 100 improvement for psoriasis were guselkumab (100%, 3/3), brodalumab (100%, 1/1), secukinumab (92%, 12/13) and risankizumab (90%, 9/10). All but adalimumab (92%, 12/13) and etanercept (90%, 27/30) achieved PASI 75 in 100% of patients. Of the 40 cases that reported time to an outcome, the mean time was 13.5 ± 12.6 weeks. Treatment duration was described in 97 cases with a mean duration of 36.7 ± 40.3 months. There were 5 reported cases of subclinical disease reactivation. Treatment-related adverse events, mostly bacterial and fungal infections, occurred in 8 cases (7.2%) with two treatment-related mortalities (acute peritonitis and pneumonia).

Conclusion:

Biological therapies used in psoriasis patients with HIV did not have a discernible impact on CD4+ status. The mean pre-treatment status was 582.2 ± 372.3 cells/ μ L compared to 699.4 ± 440.3 post-treatment. Similarly, biologics may have had a positive effect on HIV viral loads. The mean post-treatment viral count was 59 ± 160 copies/mL, an improvement from the pre-treatment load of $220,941 \pm 1,062,101$.

