

List of Abstracts

1. *In vitro and skin lesion cytokine profile in Brazilian patients with borderline tuberculoid and borderline lepromatous leprosy*

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Abstract

Objective: We investigated the in vitro and skin lesions production of cytokines in non-treated borderline tuberculoid (BT) and borderline lepromatous (BL) patients.

Patients and Methods: Seven untreated, non-reactive BT patients and 12 untreated, non-reactive BL patients were studied. Levels of the cytokines IFN- γ , IL-10, TGF- β_1 and TNF- α were measured in supernatant of peripheral blood mononuclear cells (PBMC) cultures, stimulated with specific *M. leprae* antigen (sonicated and whole). The cytokines iNOS, IL-10 and TGF- β_1 were detected by immunohistochemistry in skin biopsies.

Results: BT patients produced higher levels of IFN- γ than BL patients; iNOS expression in skin lesions was also higher in BT patients. TGF- β_1 was detected in more cells in BL patients; IL-10 expression was similar in both groups. There was a negative correlation between iNOS and TGF- β_1 expression in skin biopsies, positive

correlation between TGF- β_1 in skin lesions and bacillary index, as well as positive correlation between iNOS detected in skin biopsies and PBMC IFN- γ production.

Conclusions: The BT patients had a mainly a Th1-profile of cytokines in their skin lesions and BL patients had a Th2 profile.

2. *A Phase Two Randomised Controlled Double Blind Trial of High Dose Intravenous Methylprednisolone and Oral Prednisolone versus Intravenous Normal Saline and Oral Prednisolone in Individuals with Leprosy Type 1 Reactions and/or Nerve Function Impairment*

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Abstract

Background: Leprosy Type 1 reactions are a major cause of nerve damage and the preventable disability that results. Type 1 reactions are treated with oral corticosteroids and there are few data to support the optimal dose and duration of treatment. Type 1 reactions have a Th1 immune profile: cells in cutaneous and neural lesions expressing interferon- γ and interleukin-12. Methylprednisolone has been used in other Th1 mediated diseases such as rheumatoid arthritis in an attempt to switch off the immune response and so we investigated the efficacy of three days of high dose (1 g) intravenous methylprednisolone at the start of prednisolone therapy in leprosy Type 1 reactions and nerve function impairment.

List of Abstracts

Results: Forty-two individuals were randomised to receive methylprednisolone followed by oral prednisolone (n = 20) or oral prednisolone alone (n = 22). There were no significant differences in the rate of adverse events or clinical improvement at the completion of the study. However individuals treated with methylprednisolone were less likely than those treated with prednisolone alone to experience deterioration in sensory function between day 29 and day 113 of the study. The study also demonstrated that 50% of individuals with Type 1 reactions and/or nerve function impairment required additional prednisolone despite treatment with 16 weeks of corticosteroids.

Conclusions: The study lends further support to the use of more prolonged courses of corticosteroid to treat Type 1 reactions and the investigation of risk factors for the recurrence of Type 1 reaction and nerve function impairment during and after a corticosteroid treatment.

3. Does clofazimine prevent Erythema Nodosum Leprosum (ENL) in leprosy? A retrospective study, comparing the experience of multibacillary patients receiving either 12 or 24 months WHO-MDT

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Abstract

Objectives: To compare the occurrence, duration and severity of ENL in leprosy patients treated with either 12 or 24 months of standard multi-drug therapy (MDT). **Materials and Methods:** Study population: 296 patients treated with MDT for 2 years, between 1985 and 1992 and followed up as part of a relapse study; and 293 patients, treated between 1998 and 2004, with MDT for 1 year and also followed up as part of a relapse study. The Chi squared test and multiple logistic regression analysis were used to test for statistical significance.

Results: ENL was not significantly more common, but it was longer-lasting and more severe in patients receiving only 12 months of MDT, as compared with those receiving 24 months treatment. A high BI at the start of treatment significantly increased the risk of severe ENL by a factor of between 6 and 12, while treatment with 12 instead of 24 months of MDT significantly increased the risk by a factor of between 3 and 10.

Conclusions: This study provides further evidence that a high initial BI is the key risk factor for ENL. It also suggests that the difference between these two cohorts in their experience of ENL as demonstrated in this study, may be related to the different amounts of clofazimine which the two cohorts were given in the early years of their treatment. Further studies are needed to determine whether clofazimine could be used more specifically to reduce the severity of ENL in the small group of patients at high risk for the condition.

4. Antioxidant status in patients with lichen planus

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Clin Exp Dermatol. 2011 Dec;36(8):851-4.

Abstract

Background: Lichen planus (LP) is an autoimmune inflammatory disease of the mucocutaneous tissue, whose exact pathological course is not yet understood. Many studies have implicated the role of reactive oxygen species (ROS) and the protective role of antioxidants in several autoimmune skin disorders. In this study, serum levels of antioxidants in patients with LP were determined and compared with those of healthy controls.

Methods: In total, 30 patients with LP (mean \pm SD age 41.63 ± 13.03), who had never received

List of Abstracts

treatment for their disease, were enrolled; 30 healthy people (aged 41.17 ± 13.24) were recruited as the control group. Serum levels of glutathione peroxidase (GPX), vitamin C, selenium, bilirubin and uric acid were determined. Results. The mean plasma level of vitamin C was significantly lower ($P < 0.001$) in patients compared with controls. A significant positive correlation was found between selenium and GPX in both patients (Spearman $q = 0.99$, $P < 0.001$) and controls ($q = 0.10$, $P < 0.001$).

Conclusions: Lower serum levels of vitamin C in patients with LP indicates that free radicals and the resulting oxidative damage may be important in the pathogenesis of LP lesions.

5. *Dermoscopy versus Tzanck smear test: A comparison of the value of two tests in the diagnosis of pigmented skin lesions*

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J Am Acad Dermatol. 2011 Nov;65(5):972-82

Abstract

Background: Dermoscopy is the most commonly used noninvasive tool for the diagnosis of pigmented skin lesions, but few studies have investigated the value of cytology in the identification of those lesions.

Objective: We compared the accuracy of dermoscopy with that of the Tzanck smear test in the diagnosis of pigmented skin lesions, and in differentiating melanocytic from nonmelanocytic lesions.

Methods: Two dermatologists used either dermoscopy or the Tzanck smear test to evaluate pigmented skin lesions, and the diagnostic accuracy of those methods was determined.

Results: Two hundred pigmented skin lesions (110 melanocytic and 90 nonmelanocytic) were evaluated. Cytology was superior to dermoscopy

in differentiating melanocytic pigmented lesions from nonmelanocytic pigmented lesions, but the overall diagnostic accuracy of those methods was the same (90.5%) for all lesions. The diagnostic accuracy of the Tzanck smear test was higher than that of dermoscopy for both melanocytic and nonmelanocytic malignant pigmented lesions; however, those differences were not significant.

Limitations: Pigmented skin lesions were not evaluated by a dermatologist who used a combination of dermoscopy and the Tzanck smear test. No conclusion was made about the reliability of those two methods or whether the experience of the dermatologist affected the results. Immunohistochemical staining of the cytologic samples was not performed.

Conclusion: The diagnostic accuracy of the Tzanck smear test in assessing pigmented skin lesions is similar to that of dermoscopy. The Tzanck smear test may be a useful diagnostic adjunct to dermoscopy for determining the melanocytic or nonmelanocytic origin of certain pigmented skin lesions.

6. *Comorbidity profiles among patients with alopecia areata: The importance of onset age, a nationwide population-based study*

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J Am Acad Dermatol 2011; 65:949-56.

Abstract

Background: Alopecia areata (AA) is considered an autoimmune disease with undetermined pathogenesis. Age at onset predicts distinct outcomes. A nationwide study of the relationship of AA with associated diseases stratified by onset age has rarely been reported.

List of Abstracts

Objective: We sought to clarify the role of atopic and autoimmune diseases in AA, thereby better understanding its pathogenesis.

Methods: A total of 4334 patients with AA were identified from the National Health Insurance Database in Taiwan from 1996 to 2008. A national representative cohort of 784,158 persons served as control subjects.

Results: Among patients with AA, there were significant associations with vitiligo, lupus erythematosus, psoriasis, atopic dermatitis, autoimmune thyroid disease, and allergic rhinitis. Different ages at onset resulted in disparate comorbidities. Increased risk of atopic dermatitis (odds ratio [OR] 3.82, 95% confidence interval 2.67-5.45) and lupus erythematosus (OR 9.76, 95% confidence interval 3.05-31.21) were found in childhood AA younger than 10 years. Additional diseases including psoriasis (OR 2.43) and rheumatoid arthritis (OR 2.57) appeared at onset age 11 to 20 years. Most atopic and autoimmune diseases were observed at onset ages of 21 to 60 years. With onset age older than 60 years, thyroid disease (OR 2.52) was highly related to AA. Moreover, patients with AA had higher risk for more coexisting diseases than control subjects.

Limitations: We could not differentiate hypothyroidism from hyperthyroidism. Conclusions: AA is related to various atopic and autoimmune diseases. Different associated diseases in each onset age group of AA can allow clinician to efficiently investigate specific comorbidities.

7. *Evaluation of Self-Collected Versus Clinician-Collected Swabs for the Detection of Chlamydia trachomatis and Neisseria gonorrhoeae Pharyngeal Infection Among Men Who Have Sex With Men*

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Sex Transm Dis. 2011 Nov; 38(11):1036-9

Abstract

We evaluated self-sampling to detect pharyngeal Chlamydia trachomatis (CT) and Neisseria gonorrhoeae (NG) infection among men who have sex with men attending a San Francisco STD clinic. The prevalence of pharyngeal NG and CT infection was 6.7% (32/480) and 1.3% (6/480), respectively. The percent agreement between self-collected and clinician-collected NG and CT specimens using nucleic acid amplification testing was 96.6% with a κ of 0.766 (95% confidence interval: 0.653-0.879) and 99.4% with a κ of 0.766 (95% confidence interval: 0.502-1.000), respectively. Acceptability was high among participants.

8. *Resistant Trichomoniasis: Successful Treatment With Combination Therapy*

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Sex Transm Dis. 2011 Oct; 38(10):962-3

Abstract

Metronidazole-resistant vaginal trichomoniasis remains a major therapeutic challenge. Two women with symptomatic metronidazole-resistant trichomoniasis had multiple unsuccessful courses of therapy with a broad array of medications. Both patients finally responded to combination treatment with intravaginal paromomycin cream and high-dose oral tinidazole.

9. *Contraceptive practices, sexual and reproductive health needs of HIV-positive and negative female sex workers in Goa, India*

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Sex Transm Infect. 2011 Feb; 87(1):58-64

Abstract

Objectives: In India, female sex workers (FSWs), suffer from high HIV prevalence and abortions. Contraceptive use among general population women is well understood. However, FSWs contraceptive practices and reproductive health

List of Abstracts

needs are under-researched. We investigated contraceptive practices among HIV-positive and negative FSWs in Goa, India and explored its association with socio-demographic and sex work related factors.

Methods: Cross-sectional study using respondent driven sampling recruited 326 FSWs. They completed an interviewer-administered questionnaire and were screened for STI/HIV. Multivariable logistic regression was used to explore factors associated with sterilisation relative to no contraception.

Results: HIV prevalence was high (26%). Of the 59 FSWs planning pregnancy, 33% were HIV-positive and 5-7% had Gonorrhoea, Chlamydia and Trichomonas. 25% and 65% of FSWs screened-positive for Syphilis and Herpes simplex virus type 2 antibodies respectively. Among the

260 FSWs analysed for contraceptive use, 39% did not use contraceptives, and 26% had experienced abortion. Half the FSWs had undergone sterilisation, and only 5% used condoms for contraception. Among HIV-positive FSWs, 45% did not use contraceptives. Sterilisation was independently associated with older age, illiteracy, having an intimate non-paying male partner, having children and financial autonomy. Exposure to National AIDS Control Organisation's HIV-prevention interventions was reported by 34% FSWs and was not significantly associated with contraceptive use (adjusted odds ratio 1.4, 95% CI 0.7 to 2.9).

Conclusion: HIV-prevention interventions should promote contraception, especially among young and HIV-positive FSWs. Integrating HIV treatment and care services with HIV-prevention interventions is vital to avert HIV-positive births.