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Prevalence of Fibromyalgia and TMDs O PLESH*K HURSH D LE N LANE and F WOI FE (Univ of California San Francisco and Univ of Kansas Wichita USA)

Although both Temporomandibular disorders (TMDs) and fibromyalgia (FM) are chronic pain syndromes there is little information on the relationship between the two conditions The aim of this study was to investigate the prevalence of TMDs in FM patients and the prevalence of FM in TMDs patients The FM group consisted of 60 patients clinically diagnosed with fibromyalgia recruited from rheumatology clinics or responding to a local advertisement The TMDs group consisted of 39 patients seen in a TMD private practice (PP) and a group of 188 consecutive patients seen in 1995 at the UCSF TMD clinic (UCSF) clinically diagnosed with TMDs Each patient underwent two types of examinations one for FM, according to the American College of Rheumatology (ACR) criteria and one for TMDs according to the Research Diagnostic Criteria for TMDs (RDC/TMDs) Each examination consisted of a set of questionnaires and a clinical examination Data from both ACR and RDC/TMD forms have been scored and statistically analyzed The fibromyalgia group consisted of 93% women and the TMD groups of 98% (PP) and 89% (UCSF) women The mean age of fibromyalgia group was 50 9±8 4 years, and the mean age of TMDs groups was 42 5±10 3 years ($p<0.05$) The FM group presented a 75% prevalence of TMDs compared to the TMDs group in which the prevalence of FM was 17 9% (PP) and 16 3% (UCSF) Sixty two percent of the FM group met the ACR criteria There was no age difference between the FM patients who met the ACR criteria vs those who did not ($p=0.28$) The prevalence of TMDs in the FM group meeting the ACR criteria was 84% vs 56% for those who did not These preliminary data suggest that some TMD patients may develop a more widespread pain such as FM Supported by a Grant from UCSF Academic Senate

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Comorbidity between Myofascial Pain of the Masticatory Muscles and Fibromyalgia T T T DAO* W J REYNOLDS H C TENENBAUM F A LUE and H MOLDOFSKY (Fac Dentistry Toronto Western and Mount Sinai Hospitals Univ of Toronto Canada)

Although few reports have indicated that myofascial pain of the masticatory muscles (MFP) and fibromyalgia (FM) present overlapping signs and symptoms there is no direct evidence for their comorbidity In this early phase of our study 12 MFP and 20 FM patients reported their facial pain and their pain in various body sites on 100 mm visual analogue scales They also used the McGill Pain Questionnaire (MPQ) to describe their pain experience In the FM group while 45% of the patients had current facial pain 65% reported having facial pain in the last 6 months Their mean facial pain (± S E) [42 2 ± 9 8mm] was comparable to that of the MFP patients [44 4 ± 6 4mm] although their mean body pain [50 9 ± 4 1mm] was significantly higher than that of the MFP group [29 3 ± 4 8mm $t = 3.32$ $p<0.01$] While there were significantly more FM than MFP patients who had pain in various body sites a substantial number of MFP patients reported pain in the neck (75%) shoulders (66 7%) arms (66 7%) upper back (33 3%) lower back (58 3%) and in the hips (41 7%) At these body sites mean pain intensity ranged from 32 0mm to 44 4mm With the present sample size the two groups could not be distinguished from each other using the MPQ scales for the Sensory (S) Affective (A) and Miscellaneous (M) components of pain In FM patients the mean values of these scales (± S E) were S 13 1 ± 1 4 A 6 5 ± 0 7 and M 5 9 ± 0 6 the corresponding values for MFP patients were S 10 6 ± 5 7 A 4 4 ± 0 7 and M 6 2 ± 0 8 Ratings of the Evaluative dimension of pain and the Total Pain Rating Index in the FM patients [3 3 ± 0 2 and 29 2 ± 2 4 respectively] were significantly higher than in the MFP group [2 6 ± 0 2 and 20 7 ± 2 8 respectively $p \le 0.05$] These prelim nary data showed that facial pain was a common symptom in FM patients and that the major ty of MFP patients experienced pain in body sites other than the facial area This suggests that MFP may not be a local zed pain disorder as previously thought Supported by the Connaught Fund

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PREVALENCE OF TEMPOROMANDIBULAR DISORDERS AND TREATMENT NEEDS IN FRENCH POPULATION F UNGER A HOORNAERT S UNGER S VOL, J TICHET (IRSA Tours and Dental School of Nantes France)

The purpose of this syudy was to establish the prevalence of signs and symptoms of temporomandibular disorders (TMD) in a large french non patient population and to analyse the data for statistically significant associations, and to evaluate the treatment needs The medical screening exam nation for french wage earners given by the I R S A for the Social Security provided and opportunity to conduct the investigation Our sample is made of 55727 subjects (25969 males and 29758 females) This medical screening is made of an autoquestionnaire of 200 items about life habits and general state of health and a clinical examination of all apparatus We added for the TMD survey 4 items that sollicited relevant symptoms (subjective) and a specific clinical examination for TMD that comprised 5 records of signs (objective) 73 8% of our population have no symptom 7 2% have pain without dysfunction 13,7% dysfunction without pain and 5 3% pain and dysfunction The frequency of the symptoms is more important for females than for males for all the ages Symptoms are increasing with age except the sound of TMJ There are very high significant differences (pc 0 001) beetween populations with or without pain for family life, jobs nourishement, general state of health and the use of drugs. The 5 signs of the clinical exam nation were used to define tree levels of treatment needs With our criterias we founded 4 7% of females and 2 2% of males whitch needed treatment The present study suggest that most people with signs and symptoms of TMD are fonctionning adequately But our study suggest also that treatment needs have to be correlated with locomotion apparatus pathologies, otorhinolaryngological problems and psychiatric deases, particularely for the chronic painfull sublects.

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SCL-90 Nonspecific Physical Symptoms in Tinnitus vs Non Tinnitus TMD Patients G MALONEY, E MATIGNON*, N MEHTA, A. FORGIONE and R E CLARK (Tufts U S D M , Boston, MA, USA)

Nonspecific physical symptoms were analyzed to determine differences in response to the SCL 90 Somatization subscale between tinnitus TMD patients (Ts) and non-tinnitus TMD patients (NTs) Forty-eight Ts were found among 300 TMD patient records (4 were rejected due to incomplete records leaving 23 female and 21 male Ts) and 48 NTs were selected at random from the same population and balanced for gender Raw scores of the nonspecific physical symptoms, pain items included, showed that the Ts scored significantly higher (median=1 12) than NTs (median=0 53), U=701.5, $Z_{corr\ ties}=2.77$, $p=0.006$ When pain items were excluded, Ts' scores (Median=1 93) were not significantly different from NTs' (median=0 89), U=701 5, $Z_{corr\ ex}=1.31$, $p=0.19$ Raw scores were then ordinalized as *Normal, Moderate* or *Severe* according to Axis II scoring criteria of the Research Diagnostic Criteria for TMD (Dworkin and LeResche, Eds *J Craniomandibular Disorders Facial and Oral Pain, 6 4, 1992*) With pain items included, Chi Square tests comparing the three categories showed the distribution of Ts to be significantly different from that of NTs ($p<0.01$), excepting the *Normal* vs *Moderate* catagories ($p>0.10$) When pain items were excluded, the distributions over the three categories were not different ($0.10>p>0.05$) Thus, Tinnitus TMD patients tended to report higher pain item scores, placing more of them in the *Severe* category of the Axis II, Research Diagnostic Criteria.

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A Longitudinal Study of *A actinomycetemcomitans* in Army Recruits H P MÜLLER* D LOBINSKY L ZÖLLER T EGER S HOFFMANN (Univ of Heidelberg Ernst Rodenwaldt Institute German Armed Forces Koblenz Germany)

On occasion of recruiting examinations, 201 recruits 18-25 years old were examined for subgingival and extracrevicular *A actinomycetemcomitans* The organism was isolated in 55 subjects (27 4%) most often at low levels (mean log CFU between 1 49±0 93 in positive cheek and 2 42±0 91 in pooled subgingival samples from 1st molars) Cluster analysis revealed 3 clusters with no (A n=88) or minor (B n=92) periodontal disease and low DMF-S as well as established periodontitis increased D+DF-S and high DMF-S (C n=22) When dismissing the 12 month service 105 recruits were re-examined (54 cluster A 41 cluster B 9 cluster C subjects a recruit that was not clustered) An increase of periodontal probing depth (PPD) of ≥3 mm at 1 or more sites occurred in 33 subjects 9 (17%) in cluster A 16 (39%) in cluster B 7 (78%) in cluster C and in the not-clustered recruit ($\chi^2=17.7$ $p<0.001$) Considerable variation in frequency distributions of PPD alterations was observed therefore significant ($p<0.1$) mean increase (one sample t test) and skew g_1 (S-statistic) were additionally considered to define an "active" case A total of 8 recruits (7 6%) met the criteria Logistic regression analysis revealed significant ($p=0.0008$) influence of cluster (odds ratios of 0 002 and 0 007 for clusters A and B resp) and self reported smoking habits (<10 10 20 >20 cigarettes/d odds ratio 2 81) on disease development or progress on whereas bleeding on probing was negatively associated A *actinomycetemcomitans* was isolated in 30 recruits (28 8%) Intraoral presence of the organism was not included in the logistic regression model It was concluded that smoking is a significant risk factor for periodontitis Subjects with established periodontitis tend to further deteriorate. *A. actinomycetemcomitans* seems not to increase the risk for developing or progressing periodontitis in this age group. Longer studies are needed to confirm these observations

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Detection of motile bacteria in the subgingival plaque of Brazilian subjects by the slot immunoblot technique. I. R. RUBIRA*, D LOPATIN O P ROSA. (University of São Paulo Bauru, Brazil, University of Michigan, Ann Arbor, USA)

Motile oral bacteria may contribute to the destruction of the periodontium Since they have be found to be associated with the presence of periodontitis in other studies, we sought to evaluate their association with periodontal disease in a Brazilian population One hundred and forty-eight subgingival plaque samples were collected from 10 healthy subjects (4 samples per subject) and 27 individuals with adult periodontitis (probing depth >4mm) The plaque samples were suspended in phosphate-buffered saline containing protease inhibitors and 0,5% formaldehyde, briefly sonicated to disperse bacterial aggregates and applied to nitrocellulose membranes in a slot blot manifold The membranes were blocked with powdered milk and then incubated with rabbit anti *T denticola* (Td) *T vicentii* (Tv) and *S sputigena* (Ss) antibodies, followed by an anti rabbit alkaline phosphatase conjugate, and then developed with BCIP-NBT substrate The results were scored positive or negative against reference standards The prevalence of positive samples in the periodontal and healthy groups were, respectively, Td. 99% vs. 80%, Tv 99% vs. 45% and Ss 91,6% vs 32.5% The groups differed significantly (Mann Whitney $p<0.0001$) and correlation between pocket depth or attachment loss and the detection of Tv and Ss (Spearman $p<0.0001$) were observed The results indicated that periodontally diseased sites in Brazilian subjects are colonized with these bacteria and there is a correlation between Tv and Ss and clinical parameters of disease. Supported by CAPES and USPHS grant DE10789

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Presence of *A actinomycetemcomitans* and *P gingivalis* in young Chinese adults A MOMBELLI* K Y ZEE R GMÜR J FREY J MEYER N P LANG E F CORBET Universities of Bern Zürich Basel (Switzerland) and Hong Kong

The purpose of this study was to determine presence or absence of *A actinomycetemcomitans* (*A a*) and *P gingivalis* (*P g*) in young Chinese adults 60 subjects working in a knitting factory in the Province of Guangzhou People's Republic of China were investigated They had a mean age of 22 5±5 0 years a mean PII of 1 4±0 3 and a mean GI of 1 4±0 3 Subgingival samples were taken from both upper first molars They were cultured anaerobically and in 5% CO_2 *P g* was found in 33 subjects On average the organism contributed with 7% to the total anaerobic cultivable counts *A a* was detected in 37 subjects 7 of these subjects yielded counts $>10^5$ 21 subjects were positive for both organisms All isolates of *A a* were serotyped using monoclonal antibodies tested for presence of the leukotoxin gene *lktA* with a specific PCR assay and examined for presence of bacteriophages Serotypes b and d were not detected in any subject Serotype a was found in 9 subjects serotype c was found in 23 and serotype e in 5 Two of the subjects showed evidence for presence of two different serotypes Two individuals showed only nontypeable isolates lacking serotype a b c d or e specific antigens Presence of the leukotoxin gene *lktA* was demonstrated for all *A a* isolates Infectious phage was released from six *A a* isolates while hybridizations with phage AaO23 DNA revealed the presence of related prophages in 11 isolates The mean GI was correlated with the PII ($p<0.001$) but not with presence of *P g* any of the *A a* serotypes or phages This study shows a high frequency of *P.g.* and *A.a.* serotype c, but absence of serotypes b and d, in young Chinese adults.

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Periodontal Status of HIV( ) and HIV(+) Female Sex Workers K. GEORGAS* D BA, C CRITCHLOW N. KIVIAT P LEGGOTT C F NDIAYE, P NDOYE and P B ROBERTSON (University of Washington, Seattle)

Comprehensive studies of 92 commercial sex workers in Senegal Africa included an oral examination in which we obtained measurements of DMF teeth Plaque Index, Gingival Index, recession, pocket depth (PD) attachment loss (AL) and the presence of HIV associated periodontal and other oral lesions, under conditions wherein the examiner was unaware of the subject's HIV status Twenty-seven subjects (29%) were HIV seropositive, 19 of whom were positive for HIV 1 7 positive for HIV 2 and 1 positive for both More than two thirds of all subjects were current smokers and most had no previous dental care HIV(-) and HIV(+) subjects were similar in mean age (33±7 3 36±8 8) mean number of decayed (2 2±1 7 3 2±4 6) and missing (1 1±1 7 0 8±1 1) teeth mean percentage of sites with visible plaque (41±28 6 45±31 8) and mean number of sites with recession (11±8 4 12±10 5) Compared to HIV( ) subjects HIV(+) subjects had a significantly ($P<0.05$) greater percentage of sites with gingival bleeding (33±20 8 42±20 6) with PD≥6mm (1 5 14 8) and with AL≥6mm (10 7 22 2) No differences were observed between HIV 1 and HIV 2 positive subjects HIV associated periodontal lesions were seen in 11% of HIV(+) subjects (2 linear gingival erythema, 1 necrotizing periodontitis) and in none of the HIV( ) subjects Periodontitis defined as having at least one site with concurrent gingival bleeding, pocket depth and attachment loss was observed in 22 2% of HIV(+) subjects and in none of the HIV( ) subjects. In this population with multiple risks to oral health both HIV 1 and HIV-2 infections were associated with a significantly increased prevalence of periodontal disease. (Supported by DE 08547 & DE 11372 from NIDR and CA 62801 from NCI)