common (29.1% of POV), followed by RD (16.1%). No differences were observed between communities.

Conclusion These findings show that RD are the most common reason for POV (1 in 5 visits), mainly in the productively active age groups.

Education

SAT0225 A NOVEL WEB BASED RHEUMATOLOGY EDUCATIONAL RESOURCE – INTERACTIVE COMPUTERISED CASE STUDIES FOR UNDERGRADUATE TEACHING

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10.1136/annrheumdis-2001.805

Background We have applied the principal that the undergraduate curriculum should have a reduced burden of factual information and learning through curiosity should be encouraged,¹ to the education of our rheumatology students.

Objectives We have applied advances in computer technology to develop a web based educational strategy and evaluated its use from the perspective of the student/user.

Methods A teaching needs assessment conducted on a cohort of 30 students prompted the development of a novel interactive case studies programme, accessible through the internet. This programme utilises active server page technology (TM) reading from a database of case study information (anonymised). The user can select predefined questions, perform a virtual physical examination and gain diagnostic information by requesting laboratory tests. The user is then required to make a diagnosis and select an appropriate treatment regimen for that patient. To introduce realism, performance is evaluated by an indication of the patients outcome and the financial expenditure incurred for their consultation. Usage data was collected from online questionnaire and by computer generated log file analysis.

Results All students agreed that computer based learning was a useful adjunct to traditional teaching and greater than 95% expressed strong support for the use of computerised case studies. All questionnaire respondents (n = 17) agreed that the computer programme was well organised, realistic and that they had learnt from the experience. Although this teaching aid is primarily aimed at our local teaching hospitals, log file analysis indicates that there have been 239 visits to the site (181 unique) from North America, Europe, Asia and Oceania, suggesting a widespread interest.

Conclusion This novel interactive web based programme, based on real life patient information, will serve as a teaching resource for our allied hospitals and introduce some variety into more formal teaching practices by promoting self-learning. The techniques employed could be adaptable to other situations which would benefit from increased user interaction and in a dispersed learning environment.

REFERENCE

- 1 General Medical Council report "Tomorrow's Doctors", 1993

SAT0226 A REVIEW OF AN INTERNET BASED 'ARTHRITISHELP' RESOURCE: (HTTP://RHEUMA.BHAM.AC.UK)

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10.1136/annrheumdis-2001.806

Background The Internet is an important way of delivering medical information to assist in improving patient's self-management of their disease.

Objectives We have established an Arthritis education website ('Arthritis Help') and investigated its use over two years.

Methods Computer generated log file analysis and online questionnaire were used to create usage profiles of our web site.

Results An average of 288 people visited our site each day predominantly, but not exclusively, from America and the UK (49% of users). The typical questionnaire respondent (n = 770) was a 30+ year old American female with arthritis, accessing the Internet from home. They had previously obtained information from medical staff or in written form but were now more likely to use the Internet. 167 out of 585 respondents found our site to be useful prompting them to seek more information (29%), change their behaviour or engage in more effective discussions with their physician (15%). 427 people responded to our comments section of the questionnaire of which 333 made clear suggestions. 21% of these respondents were enquiring about a specific medical condition or requesting more information on that condition. 20% wanted more detailed information about rheumatoid conditions, treatments or drug information. 9% wished to see more information on 'alternative treatments' whilst diet, exercise, new treatments, a questions and answers section, a section to air shared experiences and links to other information formed 5–6% of respondents suggestions.

Conclusion This data indicates that it is possible to use the internet to deliver medical information to its target audience and that this process can have some impact on the way disease is self-managed. This information may aid more focused web-site design to maximise use and the potential benefits from such a resource.

SAT0227 AN ACADEMIC ARTHRITIS WEBSITE IS MOST FREQUENTLY UTILISED FOR ARTHRITIS NEWS AND TREATMENT INFORMATION

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10.1136/annrheumdis-2001.807

Background Medical and pseudo-medical information sites are the most heavily trafficked sites on the Worldwide Web. The Hopkins Arthritis Web Site was launched in late December 1998 to provide credible information about arthritis and its treatment to health care providers and patients.

Objectives Our goal was to evaluate the topics most frequently accessed by visitors to the Site.

Methods The information data base on the Site consists of a large body of 'static' information, as well as two interactive forums. The number of 'requests' for each page was monitored by Web Trends Enterprise Reporting Server. The number of requests per page was adjusted for number of months that the page was live, and sorted by topic into 1 of 6 categories. Requests were readjusted for number of pages per topic and calculated as a percent of total requests. Data were based on statistics compiled for the year 2000.

Results The frequency of visits to the 'static' pages were as follows: news items (27%), pharmacologic treatment (21%), diagnostic/therapeutic guidelines (21%), event broadcasts (12%), disease-specific education (10%), and nonpharmacologic management (8%). Highlights of the ACR meetings were one of the most heavily accessed 'news item' postings on the Site. For the interactive forums, treatment related postings constituted the majority of postings: 55% of questions in 'Ask the Expert', and 70% of postings to the Message Board. 'Hits' to the Site, and time spent on the Site, have increased steadily since launch, currently totalling 1,200,000 hits and 12 min per month, respectively.

Conclusion The versatility of the Internet confers the unique ability to constantly update educational data bases. The desire for updated information is reflected on this Arthritis Web Site by the high frequency of visits to treatment and news related pages. Credible educational websites can effectively complement traditional on-site educational forums.

Cytokines and inflammatory mediators

AB0009 TNF ALPHA AS A MARKER OF ARTICULAR INVOLVEMENT IN PATIENTS INFECTED WITH HIV

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10.1136/annrheumdis-2001.808

Background In the last years great attention was given to the problems correlated to Hiv infection. The clinical rheumatologic manifestations correlated to Hiv infection generally are oligo-polyarthritis, polyarthritis or Reiter Syndrome. The Hiv arthritis usually oligoarticular and asymmetric, involves the big articulations and it isn't correlate to Hla B27 aploype. Some studies demonstrated an articular involvement in about 30% of the patients. Seems that the particular problems are correlated with a disregulation of the immune system with a sovraexpression of some pro-inflammatory cytokines.

Objectives Aim of this study was to evaluate the prevalence of rheumatologic manifestations in patients with Hiv infection and to evaluate if there was a correlation between articular involvement and sovraexpression of TNF alpha that is such important in articular omeostasis.

Methods We selected 46 patients with Hiv infetion, mean age 39 (22-59), 10 healthy subjects and 10 with rheumatoid arthritis as negative and positive controls. At the beginning of this study we did an articular evaluation with a questionnaire with 10 items regarding rheumatological problems in all the Hiv+ patients.

Results We found rheumatologic manifestations in 11(24%) and the most common was the presence of diffuse polyartralgias. Seric TNF alpha levels were increased in the Hiv group with articular involvement and was normal in those without articular involvement ($p = 0,02$) but there weren't statistical differences between the 2 groups for CD4 count and viral load.

Conclusion TNF alpha seems to be a clear index of articular involvement in patients with HIV infection but doesn't seems to be correlated to viral load and progression of disease.

AB0010 INCREASED COLLAGEN PRODUCTION BY HUMAN LUNG FIBROBLASTS IN THE RESPONSE TO TUMOUR NECROSIS FACTOR-RELATED APOPTOSIS-INDUCING LIGAND

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10.1136/annrheumdis-2001.809

Background Tumour necrosis factor-related apoptosis-inducing ligand (TRAIL), also called Apo-2 ligand, is a member of the TNF family that has been reported to induce apoptosis in a variety of transformed cell lines, as well as in normal human hepatocytes *in vitro*. Among the family members, TRAIL displays highest homology to CD95 ligand, receptor of which may not only mediate apoptosis of T cells, but also mediate the proliferation of normal human fibroblasts. Considering structural and functional similarities between TRAIL and CD95 ligand, we examined the effects of soluble TRAIL on normal human lung fibroblasts. Collagen a2(I) mRNA expression in fibroblasts was measured by RT-PCR, with ribosomal protein S9 as an internal standard. Normalised collagen mRNA expression was increased in fibroblasts stimulated with TRAIL for 1 or 7 days, with peak response (> 5 -fold increase) at 10 ng/ml TRAIL. The increased expression of collagen a2(I) gene was confirmed by cDNA microarray that also revealed 72 other genes with expression level increased and 108 genes with expression level decreased ^a 2.2-fold in comparison with quiescent fibroblasts. There was little, if any, effect of TRAIL on fibroblast proliferation. The expression of TRAIL was also found in CD8⁺ T cell clones that had undergone oligoclonal expansion in the lungs of patients with systemic sclerosis (scleroderma) and were able to stimulate collagen production in lung fibroblasts *in vitro*. These data suggest that TRAIL can enhance collagen production by fibroblasts that are resistant to TRAIL-induced apoptosis.

Objectives

Methods

Results

Conclusion

AB0011 THE ESTIMATION OF SYNOVIAL FLUID IMMUNOLOGICAL PARAMETERS IN RHEUMATOID ARTHRITIS

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10.1136/annrheumdis-2001.810

Background

Objectives Laboratory synovial fluid (SF) tests are often held for joints condition, stage and acuteness of the inflammatory processes estimation. Immunological exams of SF is not routine procedure in clinical practice. We have studied the opportunity of immunological tests used in diagnostics of rheumatoid arthritis (RA).

Methods 44 patients (24 females and 20 males) with RA, diagnosed according to the American Colleges of Rheumatology criteria (1987) were examined. 29 of them have been seropositive. SF was taken by standard knee arthrocentesis. An immunological SF testing included determination of the levels of immunoglobulins A, M, G(IgA, IgM, IgG); C-reactive protein; circulating immune complex; complement proteins; interleukin-1beta (IL-1beta) and tumour necrosis factor alpha (TNF-alpha); rheumatoid factor (RF); phagocyte activity tests. These parameters were also determined in the venous blood of the RA patients.