had one more additional significant association: the dependence on relatives made those patients evidently depressed ($\chi^2 = 12,96$; $p = 0,00$) but not anxious.

Conclusion The anxiety and depression status of 225 RA patients turned out to be multidependent variables in strong association with social status, disability indices and ACR classes but physicians global assessment as the only one disease activity measure.

REFERENCES

- 1 Meenan RF, Gertman PM, Mason JH, Dunaif R. The arthritis impact measures scales. *Arthritis Rheum.* 1982;**25**:1048–53
- 2 Hawley DJ, Wolfe F. Anxiety and depression in patients with rheumatoid arthritis: a prospective study of 400 patients. *J Rheumatol.* 1988;**15**:932–41

THU0127 THE EVALUATION OF DISEASE OUTCOME MEASURES IN 225 RHEUMATOID ARTHRITIS LITHUANIAN PATIENTS

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Background It is commonly recognised that outcome measures in rheumatoid arthritis depend on the duration of disease and especially disability index reveals that link while the others demonstrate minor changes in the course of disease.

Objectives To test the latter hypotheses we performed the study which aimed to measure long-term outcomes of rheumatoid arthritis in 225 patients – Vilnius city inhabitants.

Methods The patients were asked to fill in the self-administered questioners as follows: Stanford HAQ (0–3,3 worth health), AIMS(1–6, 6 worth), SF-36 (0–100, 0 worth health). The entire cohort was subdivided into three groups depending on the disease duration. The first cohort with the short disease less than 5 years encountered 70 patients, second cohort between 5 to 10 years of disease duration encountered 56 patients and 99 patients with long standing disease more than 10 years duration consisted the third cohort. The differences between means (SD) of the variables were measured by F-ratio and qualified as significant if $p < 0.05$.

Results The significant differences between the cohorts were found in disability indices measured by health assessment questioner: 1,21(0,75), 1,17(0,69) and 1,45(0,83) respectively with F-ratio higher than critical value ($p = 0,048$). Aims depression and anxiety measures were not significantly different between the cohorts, the same as quality of life indices measured by SF-36. The study was found to be powerful enough -0,7- to reveal the possible differences.

Conclusion The only differences between disease duration cohorts were revealed in measuring disability indices which tended to grow with increasing disease duration while the other measures were not sensitive to change. This large enough study showed that psychological distress and quality of life measures do not depend on disease duration and the disease impact is particularly visible on disease indices.

THU0128 SYSTEMIC AA AMYLOIDOSIS IN RHEUMATOID ARTHRITIS – THE INFLUENCE OF AGE, SEX, ONSET AND DURATION OF DISEASE. A RETROSPECTIVE STUDY

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Background Rheumatoid arthritis (RA) is a chronic, recurrent autoimmune inflammatory disease, which may be complicated, like other chronic inflammatory diseases, by systemic secondary (reactive) AA amyloidosis (AAa). The precursors of AA amyloid protein fibrils are produced by the liver. During the progressive, cumulative process of systemic AAa the serum amyloid A proteins spread via the blood-stream and deposit throughout the body. AAa in its early stage involves only a few tissue structures (blood vessels, collagen, and reticulin fibres, basal membranes, etc.) in some organs, and increasingly more in its later stages. In advanced stages of AAa massive amyloid deposits in the kidney lead to renal insufficiency and the patients die of uremia. The extension and quantity of amyloid deposits depend on the production, and/or elimination (resolution, excretion) of amyloid proteins, or from the pathologist's point of view on the stage of this progressive disease at death.

Objectives The aim of this study was to determine the influence of age, sex, onset of RA, and disease duration on amyloidosis.

Methods A randomised autopsy population of 161 in-patients (female 116, average age of 64.9 years; male 45, average age of 66.2 years at death) with rheumatoid arthritis (RA) was studied.

The existence of amyloidosis and extent of amyloid deposits at death was determined histologically.

The average amount of amyloid deposition in various structures was visually evaluated on a 0 to 4 plus scale.

The correlations were determined by Mann-Whitney (Wilcoxon), critical random check, Student (Welch) t-probe, and by χ^2 -tests, comparing the age, sex, onset of RA, and duration of disease at the time of death: with or without amyloidosis, mild (? <2? per patient) and severe amyloidosis (?2

Results Systemic secondary (AA) amyloidosis was observed in 34 (21.1%) of 161 cases: in 21 cases amyloidosis was, and 13 it was severe. There was no significant difference of survival time (age at death), onset of RA, and disease duration between males and females, or between patients with and without amyloidosis. RA started earlier, the disease duration was longer, and the age of the patients at death was significantly lower ($p < 0.005$) in cases with severe amyloidosis, in comparison to those with mild amyloidosis.

Conclusion Amyloidosis may develop in both sexes, and may start at any time during RA. AAa existed in different stages (mild: characterised by sporadic and minimal amyloid deposits, or severe: characterised by diffuse and massive amyloid deposits) at the time of death. There were no significant differences in disease duration and survival time between males and females, or between patients with and without amyloidosis, suggesting that amyloid deposition may occur at different rates. AAa may develop as a rapidly progressive, or as a chronic, slowly progressive disease. Possibly, the process may become inactive (quiescent), or even regress at some point in time.

The risk of severe amyloidosis (2 <) is higher in patients with early onset and with long duration of RA, and in these patients the age at death is significantly lower ($p < 0.005$).

THU0129 UNAVOIDABLE AND MODIFIABLE RISK FACTORS FOR ISCHAEMIC HEART DISEASE (IHD) IN RHEUMATOID ARTHRITIS (RA)

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Background IHD is the commonest single cause of death in RA.¹ Having RA is an independent risk factor for the development of IHD.² Classical risk factors are also important, contributing a baseline risk as they do in the general population. The baseline risk can be calculated using general population data,³ and its modifiable component may be an important therapeutic target in RA.

Objectives To identify the absolute baseline risk in a hospital RA population, determine its modifiable and non-modifiable components, and assess the relative contribution of each of the modifiable risk factors.

Methods 63 random hospital outpatients with RA (40 females, 23 males, age: 59.75 (10.58) years) were assessed using the Cardiac Risk Analysis Body Manager Version 1.24 Software. Absolute risk value was calculated for each individual; this was subdivided into modifiable risk (calculated from weight, systolic BP, total cholesterol, smoking and exercise habits) and non-modifiable risk (calculated from gender, age and family history of IHD).

Results Total population mean (SD): Systolic BP: 145.95(22.54) mmHg; Total Cholesterol: 5.73(1.01) mmol/l; BMI: 28.12 (4.07); smokers: 19.05% [male: 21.74% vs. female 17.5%; $p < 0.01$]. 22.2% of patients (males > females, $p < 0.05$) were at high absolute risk, 68.3% at moderate risk and 10% at average or low risk of having a major cardiovascular event in the next 6–8 years. The mean absolute risk for the group was moderate 30.89(5.03)%. Most of the absolute risk was modifiable [60.89 (9.83)%] the remaining 39.17(9.78)% being non-modifiable. The largest contributors to the modifiable component were exercise 36.68(9.28)% and weight 24.24(9.68)%; Systolic BP, total cholesterol and smoking contributed much less [18.44(7.61)%, 16.32(10.34)%, and 4.02(9.42)% respectively].

Conclusion 90% of hospital RA patients have a moderate or high baseline cardiovascular risk to develop a major event in the next 6–8 years. Two thirds of this risk is modifiable, and two thirds of the modifiable component is due to reduced exercise and increased weight. We suggest that all RA patients should have their classical IHD risk factors assessed and appropriately targeted in the routine clinical setting.

REFERENCES

- 1 Wolfe F, Mitchell DM, Sibley JT, et al. The mortality of rheumatoid arthritis. *Arthritis Rheum.* 1994;**37**:481–94
- 2 Banks M, Flint J, Bacon PA, Kitas GD. Rheumatoid arthritis is an independent risk factor for ischaemic heart disease. *Arthritis Rheum.* 2000;**43**(9):S385
- 3 Liao Y, McGee DL, Cooper RS, Sutkowski MB. How generalizable are coronary risk prediction models? Comparison of Framingham and two national cohorts. *Am Heart J.* 1999;**137**:837–45

THU0130 SYSTEMIC AA AMYLOIDOSIS IN RHEUMATOID ARTHRITIS – THE INFLUENCE OF SEPTIC INFECTION, TUBERCULOSIS OR ASSOCIATED MALIGNANT TUMOURS. A RETROSPECTIVE STUDY

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Background Systemic secondary (reactive) AA amyloidosis (AAa) is one of the most important complications of rheumatoid arthritis (RA). The AA amyloid precursors are produced by the liver, basically determined by the chronic relapsing inflammation of RA. The disease may be complicated by other inflammatory

phenomena, such as generalised septic infection, chronic active tuberculosis, or may be accompanied by malignant tumours and consequent inflammation.

Objectives The aim of this study was to determine the role of lethal, generalised septic infection, or associated diseases like tuberculosis, and malignant tumours on the development and course of amyloidosis.

Methods A randomised autopsy population of 161 in-patients (female 116, average age of 64.9 years; male 45, average age of 66.2 years at death) with rheumatoid arthritis (RA) was studied.¹

AA amyloidosis (AAa), lethal septic infection (SI), inactive post-primary tuberculosis (Tb), or active miliary tuberculosis (mTb), and malignant tumours (mTu) was post mortem diagnosed histologically.

The links between AAa and coexisting complications (SI, Tb, mT, and mTu) were analysed by χ^2 -test.

Results AAa was observed in 34 (21.1%), SI in 22 (13.7%), Tb in 13 (8.1%), mTb in 6 (3.7%) and mTu in 13 (8.1%) of 161 RA patients.

AAa was associated with SI in 1, with Tb in 2, with mTb in 2, with mTu in 3 of 34 cases.

There was a negative association between AAa and SI (value of association coefficient was negative: -0.7346).

There was no significant correlation between AAa and SI ($\chi^2 = 3.1279$, $p < 0.07$), Tb ($\chi^2 = 0.0302$, $p < 0.86$), mTb ($\chi^2 = 0.05638$, $p < 0.81$), or mTu ($\chi^2 = 0.0302$, $p < 0.86$).

Conclusion AAa may be considered a direct consequence of RA.

Coexistent inflammatory complications (SI, Tb, or mTb, mTu) did not influence statistically the frequency of AAa in our autopsied RA patients. Post-primary tuberculous scars did not represent an active inflammation, and did not have a statistically significant influence on amyloidosis. Miliary dissemination of tuberculosis (endogenous reactivation of post-primary tuberculosis) must be considered a terminal pre-mortem phenomenon, which ? because of its terminal onset – did not have a statistically significant effect on prevalence of AAa.

Based on the negative value of association coefficient between AAa and SI may guess a diminished reactivity of the vessels and tissues infiltrated by amyloid. This effect is nearly significant ($\chi^2 = 3.1279$, $p < 0.07$).

REFERENCE

- 1 Bély M. Krankheitsmodifizierende Faktoren bei chronischer Polyarthrit. D. Sc. Acad. Sci. Hung. Thesis. Budapest, 1993

THU0131 VERY LONG-TERM FUNCTIONAL (HAQ) STATUS OF RA

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Background Only a few studies have attempted to determine the HAQ level of rheumatoid arthritis twenty years after onset, and how often those patients consider that RA has 'burned-out' by then.

Objectives To determine how often patients with long-lasting RA (more than 10 years' duration) consider themselves in remission and to assess their HAQ level after mean follow-up of 20 years.

Methods A questionnaire was sent to 122 patients with typical RA (100% erosive, 79% positive for rheumatoid factor) of more than 10 years' duration who had been randomly selected from the charts of 4 office-based-rheumatologists (N = 61) or a university hospital rheumatology unit (N = 61). The outcome of