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.

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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 ($\chi^2 = 3.1279$, $p < 0.07$).

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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

33/34 patients who did not return the questionnaire was determined by phone.

Results Eighty-eight of the 122 patients (63 ± 13 years of age, RA duration 20.1 ± 8.7 years) returned the questionnaire; only 80% of whom had been seen by a rheumatologist within the last year. RA burn-out was not reported, and only 6/88 fulfilled Pinals criteria for remission. However, 26% considered themselves 'in remission' for 8.5 ± 6 months, and pain was estimated at only 4.1 ± 2.3 on a visual analogue scale 0–10. HAQ remained rather low (1.11 ± 0.84) for most patients; 46% had benefited from prosthetic surgery. Among the 34 patients who did not return the questionnaire, 7 had died (at a mean age of 74 years) and the other 27 had not seen a rheumatologist for a mean 3.9 years (even though only 41% considered themselves in remission).

Conclusion RA 'burn-out' was infrequent, even after 20 years of disease duration. Conversely, more than a fourth of patients considered themselves in remission, and disease activity was frequently low. These two factors probably explain why 40% of these patients had not seen a rheumatologist for at least a year. Although the HAQ level ranged from 0 to 2.6, it was often surprisingly low. Surgery could be largely responsible for the rather good functional outcome following diagnosis of erosive RA, even after more than 20 years' duration.

THU0132 MORTALITY IN RHEUMATOID ARTHRITIS

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Background The mortality rate in rheumatoid arthritis (RA) is higher than in the general population. Several published data exist on the prevalence of the most important complications: systemic vasculitis (SV), generalised secondary AA amyloidosis (AAa), generalised septic infection (GSI), but only a few studies discuss the causal, or additive role of these complications in the mortality of RA.

Objectives The aim of this study was to determine: (1) the proportion of basic and accompanying diseases at autopsy of RA patients, (2) the incidence of major complications, e.g. SV, AAa, and GSI, (3) the mortality due to SV, AAa, or GSI, and (4) the clinically missed major complications in RA.

Methods

Patient Population.

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 RA was studied; these patients died at the National Institute of Rheumatology between 1970 and 1992.

The basic disease, complication (s), and causes of death were determined on the basis of the autopsy findings and confirmed by a detailed review of extensive histological material (50–100 tissue blocks from each patient). The tissue samples were fixed in 8% aqueous formalin at pH 7.6 and embedded in paraffin. Serial sections were cut and stained with haematoxylin-eosin, light green-orcin, sirius red F3BA, Ziehl-Neelsen's method, PAS reaction, and Congo red according to Romhányi, without alcoholic differentiation, and covered by gum-arabic (1). The (AA) amyloid was determined and characterised histochemically, and by immunohistochemical reactions.

Results

- RA was the underlying cause of death in 117 cases (73%), while in the remaining 44 (27%) cases some other basic

disease – such as atherosclerosis in 30 (19%) (atherosclerosis was more or less pronounced in about 66% of the cases), tumours in 8 (5%) of 18, tuberculosis in 2 (1.3%) of 13, accidental (postoperative thromboembolism, hypertensive crisis) in 2 (1.3%), acute and subacute hepatic necrosis, respectively, in 2 (1.3%) cases.

- SV was found in 36 (22.4%), AAa in 34 (21.1%), GSI in 22 (13.7%) of 161 RA patients. In 78 cases (48.4%) RA was not complicated by SV, AAa, GSI, in 83 cases (51.6%) one or more of these complications was present. In 74 patients (46%) only one complication, and in 9 (5.6%) two of the above mentioned complications existed simultaneously.
- SV led to death in 19 (11.8%) of 36, AAa in 17 (10.6%) of 34, GSI in 22 (13.7%) of 22 cases.
- SV was detected clinically in 7 of 36 patients (19.4 rel%), AAa in 9 of 34 (26.5 rel%), GSI in 10 of 22 (45.4 rel%). Of a total of 92 complications in 83 patients only 26 (28.3%) were recognised clinically.

Conclusion Major complications, e.g. SV, AAa, GSI were the main causes of death in our RA patients. They were responsible for 58 (49.6 rel%) in 117 cases (36% of 161 RA patients). Other RA related complications were responsible altogether for 59 (50.4%) of 117 cases (36.6% of 161 RA patients). The cause of death was not related directly to RA in 44 (27.3%) of 161 RA patients.

Coexisting complications modify the basic disease of RA and their own clinical manifestation, which may lead to an incorrect diagnosis or late recognition of the complications. More than half of *de facto* lethal complications was not diagnosed clinically.

THU0133 NEW APPROACHES IN DIAGNOSIS OF SENSOR POLYNEUROPATHY IN RHEUMATOID ARTHRITIS

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Background Investigation of vibration perception disorders is a required method for diagnosis of sensor polyneuropathy (SPNP) in case of diabetes mellitus. SPNP is one of the most frequent extraarticular symptoms of rheumatoid arthritis (RA).

Objectives To develop and introduce a new express diagnostic method for SPNP in RA into clinical practice.

Methods 91 RA patients were studied. Of them, 91% were females and 9% were males. The majority of patients had a severe form of RA. 49% had extraarticular symptoms. SPNP was studied by means of measuring of vibration perception. The biothesiometer of the EG-Electronic Company was used. Lower extremities were investigated. In addition to that electroneuro-myography (ENMG) was performed.

Results In more severe forms of RA the vibration perception considerably increased ($p < 0.01$). In the patients with extraarticular symptoms the above disorder was more severe and more frequent as compared with the patients who had no extraarticular symptoms ($p < 0.0001$). Comparison of the two diagnostic methods showed that ENMG and biothesiometry enable to diagnose SPNP with the same frequency (80% and 77% relatively).

Conclusion Thus, investigation of vibration perception is as effective as the routine ENMG. This is a painless fast express method. This new method enables to diagnose extraarticular symptoms in RA very quickly. It can be used as an additional evaluation criterion of RA severity.