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FRI0020

CORRELATION BETWEEN EXPRESSION LEVELS OF MIR-146A AND MIR-223 IN SYNOVIAL FLUID AND ULTRASOUND SCORES FOR ACTIVE SYNOVITIS IN RHEUMATOID ARTHRITIS PATIENTS

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Background: MicroRNAs (miRNAs) are a class of small, non-coding RNAs that negatively regulate gene expression at posttranscriptional level. In the recent years studies have shown that in rheumatoid arthritis (RA) the systemic and local expression of certain miRNAs is altered [1-2]. The correlation between their expression levels and scores for disease activity and progression in RA make them possible candidate for biomarkers in the clinical practice.

Objectives: To analyze the expression levels of miR-146a and miR-223 in synovial fluid (SF) from RA patients in regard to the ultrasound scores for disease activity.

Methods: A total number of 48 RA patients according to the 1987 ACR criteria were included in the study. Expression levels of miR-146a and miR-223 SF were determined by qPCR (SybrGreen technology) and compared to healthy controls (HCs). Relative changes of gene expression levels of the studied miRNAs were calculated by $2^{-\Delta\Delta Ct}$ method. Musculoskeletal ultrasound (MSUS) examination was performed by two independent examiners on ESAOTE, MyLab60 using both grey scale and power Doppler technic. A semi quantitative assessment of the peripheral joints was performed for detecting joint inflammation and determining the grade of synovial thickening and the degree of vascularization. Ultrasound features for active disease were correlated to the local expression of the studied miRNAs. SPSS was used for statistical analysis.

Results: RA SF showed overexpression of miR-146a (in 70.83%, $p=0.007$) and of miR-223 (in 79.17%, $p=1.64 \times 10^{-3}$) when compared to HCs. There was a statistically significant correlation between the presence of synovitis and the degree of the power Doppler signal on MSUS and the local expression of miR-146a ($p=0.030$ and $p=0.049$, respectively) and miR-223 ($p=6.19 \times 10^{-4}$ and $p=0.003$, respectively). SF levels of miR-223 correlated also with the degree of synovial hypertrophy on MSUS ($p=0.013$).

Conclusion: We found correlation between the SF expression of miR-146a and miR-223 and the ultrasound features of active joint inflammation. Further analysis with larger sets is needed to confirm if altered local miRNA expression could be used in the clinical practice as biomarker for disease activity especially in cases with subclinical synovitis.

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Rheumatoid arthritis – comorbidity and clinical aspects

FRI0021

ORAL HYGIENE STATUS IN RA PATIENTS AND PLACE OF RHEUMATOLOGIST IN THERAPEUTIC EDUCATION ON ORAL DENTAL HEALTH

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Background: The relationship between oral hygiene and rheumatoid arthritis has been demonstrated by several studies.

Objectives: To evaluate oral hygiene status in rheumatoid arthritis (RA) patients.

To inform about the therapeutic education given by the rheumatologist on the importance of adequate oral hygiene in the management of RA

Methods: This is a cross-sectional study that included 100 consecutive RA patients (89% female, mean age 46.7 years, median disease duration of 8 years, mean specialized care duration of 3 years). A questionnaire evaluating oral hygiene status was administered. It focused on following items: the daily frequency of brushing, the modalities of brushing, the use of other means of oral hygiene, the regular follow-up at a dentist's doctor and the place of the rheumatologist in therapeutic education on the oral dental hygiene status.

Results: Table I illustrates the results of oral hygiene evaluation in RA patients.

Table I : Evaluation of Oral Hygiene in RA patients

Items	N=100
Daily Brushing Frequency (%):	18
- 0 times/day	37
- once a day	34
- 2 times/day	8
- 3 times/day	3
- After each meal	
adequate brushing time (≥ 3 min) (%)	31
Correct brushing method (%)	14
Use of other means of oral hygiene (%)	36
Regular dentist visit (%)	2
Never visit a dentist (%)	27

Table II illustrates the results of the place of oral hygiene information in rheumatologic management.

Table II : Place of information on oral hygiene in rheumatologic care.

Questions	Yes (%)
1. does your rheumatologist ever examined your oral cavity?	6,0
2. have you ever been informed by your rheumatologist that poor oral hygiene has a negative impact on your rheumatoid arthritis?	11,0
3. Does your rheumatologist ever recommended regular brushing of your teeth?	8,0
4. Does your rheumatologist already recommended to you to consult a dentist?	10,0

Conclusion: This study illustrates the high prevalence of oral hygiene insufficiency in patients followed for RA. It also highlights poor therapeutic education given by the rheumatologist on the importance of adequate oral hygiene in the management of RA.

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