AB0801

TIME FOR REFERRAL AND DEFINITIVE DIAGNOSIS IN PATIENTS WITH HAND ARTHRALGIA

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Background: Early referral of patients with suspicion of progression to rheumatoid arthritis (RA) is of paramount importance in disease prognosis. We had previously described a time delay of 28 months between symptom onset and evaluation by a rheumatologist, and a mean wait time of 9.5 weeks for referral to a secondary-level public hospital (1). The availability of specialized interdisciplinary evaluation of patients in a third-level of care raises the possibility of shortening this time gap, as well as describing patient and physician decisions amidst the referral to a Rheumatology center.

Objectives: Describe the diagnosis profile of patients with hand arthralgia and time of referral to Rheumatology in a Family Medicine clinic.

Methods: A cohort study was conducted in 110 patients from October 2018 to December 2020 in a Family Medicine clinic within the tertiary-care University Hospital "Dr. Jose Eleuterio Gonzalez" in Monterrey, Mexico. Patients with hand arthralgia as their chief complaint were recruited. An observational, descriptive compilation of patient history was retrieved prospectively through medical records. Variables included time of inclusion, number of medical visits until referral and definitive diagnosis. Descriptive statistics, Kaplan-Meier curves and log-rank tests were used to test the association between time of diagnosis and clinical variables of interest.

Results: Assessed variables are shown in Table 1. Out of 110 patients with hand arthralgia, a quarter received a final diagnosis within 3 medical visits. Less than half of patients were referred, and only a third attended the referral indication. It takes 39.3 days from the first medical visit to be referred, and 69 days and 2.89 consultations to receive a definitive diagnosis. Around half of patients will have a definitive diagnosis, osteoarthritis being the most common. The log-rank test for categoric variables including a positive squeeze test or ≥ 4 criteria of clinically suspect arthralgia did not show a significant association for time of referral and definitive diagnosis (data not shown).

Table 1. Diagnostic and referral characteristics of patients with hand arthralgia attending a Family medicine clinic

Patients recruited in a Family Medicine clinic	n = 110
Female, n (%)	90 (81.8)
Age in years, mean $\pm$ SD	49.69 $\pm$ 14.90
RF, ACPA, or hand radiography request, n (%)	100 (90.9)
Diagnosis in Family Medicine	
Diagnosed patients after 1 medical visit, cumulative n (%)	5 (4.6)
Diagnosed patients after 2 medical visits, cumulative n (%)	22 (20.0)
Diagnosed patients after 3 medical visits, cumulative n (%)	26 (23.6)
Referral to Rheumatology for diagnostic doubt or clinical follow-up	
Patients referred to a Rheumatology clinic, n (%)	49 (44.5)
Patients attending Rheumatology referral, n (%)	34 (30.9)
Time for referral, days $\pm$ SD	39.37 $\pm$ 38.64
Global definitive diagnosis	
Patients with a definitive diagnosis, n (%)	51 (46.4)
Osteoarthritis diagnosis, n (%)	23 (20.9)
Rheumatoid arthritis diagnosis, n (%)	13 (11.8)
Overlap syndrome diagnosis, n (%)	5 (4.5)
Time for definitive diagnosis, days $\pm$ SD	68.96 $\pm$ 106.57
Number of consultations for definitive diagnosis, mean $\pm$ SD	2.86 $\pm$ 1.05

RF, rheumatoid factor; ACPA, anticitrullinated protein antibodies; SD, standard deviation.

Conclusion: Patients with hand arthralgia evaluated in a tertiary-care Rheumatology center receive a timely referral in one month and a definitive diagnosis after 3 medical visits in around two months.

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Graphs:

Graph 1. Kaplan-Meier curve of time to definitive diagnosis in patients with hand arthralgia as their chief complaint in a Family Medicine clinic.

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AB0802

THE CORRELATION BETWEEN N-MID OSTEOCALCIN SERUM VALUES AND BONE MINERAL DENSITY VALUES IN FEMALE SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS WHO RECEIVED ORAL METHYLPREDNISOLONE THERAPY BASED ON CUMULATIVE DOSES

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Background: Systemic Lupus Erythematosus (SLE) is a complex autoimmune disease and involves many organ systems in the body. Glucocorticoids are potent anti-inflammatory and immunosuppressive agents used in patients with SLE. The cumulative dose of steroids is a major risk factor for bone loss. A sensitive indicator that reflects bone remodeling activity is a bone turnover marker (BTM), one of which is N-MID Osteocalcin. Bone Mineral Density (BMD) with DXA can be used to assess osteoporosis. DXA is thus not feasible for screening because of its high cost and lack of machine availability. N-MID Osteocalcin is cheaper and more accessible than DXA. The majority of SLE patients at Moewardi Hospital, Surakarta, received the main therapy for methylprednisolone.

Objectives: This study aims to prove the correlation between serum N-MID Osteocalcin values and BMD values in female SLE patients who received oral methylprednisolone therapy based on cumulative doses.

Methods: This is a cross-sectional study with random sampling techniques at Rheumatology Clinic Moewardi Hospital, Surakarta. The 38 samples that met the inclusion criteria were measured BMD by DXA and examined for N-MID Osteocalcin by using the Elecsys N-Mid Osteocalcin Kit with the ECLIA method. The cumulative dose of methylprednisolone is calculated in grams. Data analysis used the Shapiro Wilk test, 2 mean difference test (t-test and Mann Whitney test), Chi-Square test, bivariate correlation analysis and Moderated Regression Analysis.

Results: There were 38 samples, 34 (89.47%) normal BMD and 4 (10.53%) Osteoporosis. The N-MID Osteocalcin has a positive and significant correlation both with the BMD Total L1-L4 as well as the BMD NLF ($p < 0.05$). The cumulative dose of MP has a negative and significant correlation both with the BMD Total L1-L4 also with the BMD NLF ($p < 0.05$). MP cumulative dose can significantly function as a moderation of the effect of N-MID Osteocalcin both on the BMD Total L1-L4 or the BMD NLF. The effect of the N-MID Osteocalcin on the total BMD of L1-L4 or the BMD NLF at the Cumulative Dose MP ≥ 8 g was weaker than that of the MP Cumulative Dose < 8 g, and the moderating effect of the correlation between N-MID Osteocalcin and BMD was larger on the total BMD of L1-L4.

Conclusion: There is a positive correlation between serum N-MID Osteocalcin values and BMD values in SLE female patients receiving oral methylprednisolone therapy and the cumulative dose of Methylprednisolone affects the correlation between N-MID Osteocalcin values and BMD values in SLE female patients receiving oral methylprednisolone therapy.

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Public health, health services research, and health economics

AB0803

EXPERIENCES OF SCREENING AND DIAGNOSIS FROM THE PERSPECTIVE OF PATIENTS WITH PSORIASIS AND PSORIATIC ARTHRITIS (PSA)

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Background: Psoriatic arthritis (PsA) is an inflammatory arthritis characterised by pain, swelling and stiffness in the joints and affects approximately 0.3 to 1.02% of the UK population [1]. PsA may result in limited physical function and reduced quality of life [2] and is associated with work disability and unemployment [3]. Patients who have the inflammatory skin condition, psoriasis, are at greater risk of developing PsA than those without.

Objectives: There is no definitive test for PsA. It is usually diagnosed by rheumatologists in secondary care, after referral from primary care. Evidence suggests a delay in diagnosis results in worse outcomes for patients. This study is nested within a randomised controlled trial (RCT) of a new clinical care pathway. The RCT is testing whether screening primary care patients with psoriasis for symptoms of PsA leads to earlier diagnosis and improved outcomes, compared to usual care. This qualitative study explored the acceptability and impact of screening.

Methods: Telephone interviews were conducted with patients with psoriasis from two secondary UK care centres taking part in the RCT. The semi-structured interviews explored patients' thoughts and feelings around screening, the impact of the screening outcome and any changes they made as a result. The semi-structured format allowed flexibility to ask questions that probed more deeply and develop new lines of enquiry based on patients' responses. Patients who did and did not receive a diagnosis of PsA were interviewed.

Results: Twenty-four patients participated in the study (15 women / 9 men) ranging in age from 35 to 73 years old. The length of time patients had psoriasis ranged from 6 to 60 years. Eleven patients were diagnosed with PsA. A Framework Analysis Approach was used to analyse the data. This allowed for an exploration of the predefined areas (the screening process) as well as remaining open to capturing other related experiences and views of patients. Four main themes represent the data (Table 1).

Table 1.

Main theme	Sub-themes
1. Living with psoriasis and psoriatic arthritis:	1. Understanding of psoriasis – causes, symptoms, treatments
'It's [psoriasis] socially debilitating...makes you look a real mess'	2. Effects of psoriasis on self, personal and working life
'It's almost as if the world's on your shoulders'	3. Awareness of PsA
2. Experience of screening:	1. Thoughts and feelings prior to screening
'I was able to talk and be listened to'	2. Valuing 'high quality' care
'It's a lightbulb moment...explained why things were a bit stiff and achy'	3. Impact of screening outcome
3. Gaining control:	1. Increased awareness and knowledge of psoriasis and PsA
'element of surprise that this arthritis should be connected to it [psoriasis]'	2. Improved self-management
'You've got to learn to listen to your body'	3. Early diagnosis of PsA
4. Future screening programs:	1. Changes to questionnaires
'there weren't really any questions about were you in pain?'	2. Use of case studies, sign-posting
'support groups...peer support is crucial with long-term conditions'	3. Removing barriers to screening

Conclusion: This study indicates screening was viewed as a positive and reassuring experience. Patients valued the fact that screening appointments were not rushed and felt they were being listened to. Patients valued learning about psoriasis and PsA and referred to making changes beneficial to their health. Screening enabled patients to get the help they needed if diagnosed, provided relief if not diagnosed, and sometimes led to the diagnosis of a different condition.

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AB0804

ONE YEAR FOLLOW-UP SAFETY AND EFFICACY RESULTS OF VACCINATION PROTOCOL FROM A RHEUMATOLOGY CLINIC

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Background: Patients with autoimmune inflammatory rheumatic diseases (AIIRD) have a higher burden of infectious diseases compared to the general population. This could be explained by the disturbances in their immune system response, comorbidities and immunosuppressive treatment. Vaccination is the most effective measure to prevent infections.

Objectives: To describe a cohort of patients with AIIRD referred to the infectious disease's unit according to the vaccination protocol.

Methods: Retrospective and descriptive study of a cohort of 286 patients with AIIRD who were evaluated in the rheumatology service of a tertiary hospital in Barcelona and referred to the infectious disease's unit according to the vaccination protocol among 1 year, between January 1st December 31st, 2019. The vaccination protocol included serologies of human immunodeficiency virus, hepatitis A, B and C, varicella zoster, tuberculosis, measles, mumps and rubella virus. The recommended vaccines were *H. influenzae b*, *S. pneumoniae*, influenza, hepatitis A and B (immunity absence), *meningococcus c*, tetanus – diphtheria (low antigenic load), poliomyelitis and human papillomavirus (not vaccinated). The patients included were diagnosed with a rheumatologic condition under immunosuppressive therapy. Demographic variables, diagnosis, treatment, vaccines administered, infections and adverse effects were collected.

Results: Of 286 patients reviewed the mean age was 61, 4 (±14.4) years. The characteristics of the cohort are shown in Table 1. Most of the patients used csDMARDs 149 (52.1%), 77(26.9%) patients used combined treatment. Measles and rubella are part of the triple virus vaccines included in the systematic Spanish vaccination schedule, in our cohort 20 (7%) patients had negative serologies for measles and 26 (9%) for rubella. 57 (20%) patients had latent TB with positive Quantiferon. Forty-one (14.3%) were vaccinated before receiving immunosuppressive treatment. The less administered vaccine was influenza with 44.9% (vaccination rate in Spain in healthy population, in 2019-2020 was 51.2%). No serious adverse effects were reported in relation to the vaccination. The infectious complications during the follow-up period were bronchopneumonia in a patient with RA treated with certolizumab (1), herpes zoster infection in RA on adalimumab (1), recurrent otitis in RA on adalimumab (1), mycobacterium avium infection in RA on etanercept (1), TB reactivation in RA with GCs and csDMARDs (1) and Papilloma virus infection in SpA on ustekinumab (1).

Table 1. CHARACTERISTICS OF COHORT OF PATIENTS

Sex n % (women/men)	193/93 (67.5/32.5)
Age, years ± DE	61.4 ± 14.4
Diagnoses AIIRD, n (%)	
Rheumatoid arthritis n (%)	164 (57.3)
Systemic lupus erythematosus n (%)	6 (2.1)
Sjögren's syndrome n (%)	9 (3.1)
Systemic sclerosis n (%)	1 (0.35)
Inflammatory myopathies n (%)	5 (1.7)
Vasculitis n (%)	36 (12.6)
Polymyalgia rheumatica n (%)	4 (1.4)
Spondyloarthropathy n (%)	46 (16.1)
Others n (%)	15 (5.2)
Treatment AIIRD	
GCs n (%)	116 (40.7)
csDMARDs n (%)	149 (52.1)
bDMARDs n (%)	80 (27.8)
tsDMARDs n (%)	7 (2.4)
Others n (%)	12 (4.2)
GCs + csDMARDs n (%)	59 (21)
GCs + bDMARDs n (%)	14 (4.9)
GCs + csDMARDs + bDMARDs n (%)	4 (1.4)
Vaccines	
PCV 13 n (%)	283 (99)
PPSV23 n (%)	265 (93)
HIB n (%)	265 (93)
NM n (%)	247 (86.7)
Influenza n (%)	128 (44.9)
HBV n (%)	121 (42.3)
Vaccination before IS n (%)	41 (14.3)
Vaccination with IS n (%)	244 (85.3)

Other: Behcet, Adult Still's, Relapsing polychondritis, IgG4 related disease, Sarcoidosis Others¹: Mycophenolic acid, cyclosporine and tacrolimus