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Evaluation Survey of Rheumatoid Arthritis Management by General Practitioners in Morocco

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Original Research Article

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Abstract: The aim of this study was to evaluate the management of RA by general practitioners (GP) in Morocco and to check whether their current practices were consistent with and adhered to the recommendations on best clinical practices. With this goal in mind, a survey was conducted among GPs operating both in the public and in the private sectors in the kingdom. A questionnaire was developed, validated by an expert committee and granted permission by the Moroccan Society of Rheumatology (SMR) and then sent to all affiliated GPs using Google forms (i.e. a tool for collecting opinion polls). The questionnaire included multiple choice questions and a clinical case. Among the 9055 GPs practicing in Morocco, email addresses of only 3400 were available. Among the 890 valid mail addresses, only 220 GPs answered back, representing a total participation of 24.71%. The average number of patients with RA seen monthly by a medical officer was 5.75 patients per month. With regard to diagnosing RA, half of the GPs were not familiar with the deadline for early diagnosis. One usually initiated corticosteroids at a dose of 15-20 mg / day. For ongoing monitoring f RA activity, 60% of GPs were unaware of DAS28, and 59% did not know the new2010 diagnostic criteria. For first-line therapy, 42% did not consider Methotrexate as the standard first-line treatment for patients with RA. For 83% of GPs, treatment could be initiated beyond 3 months of the window of opportunity. A substantial majority of them expressed their wish to receive ongoing and targeted training on the disease. Our investigation revealed that there was a significant discrepancy in the current practices of GPs. A new impetus is given to the debate on defining the role of learned societies in the provision of on-going training which must be ensured and institutionalized.
Keywords: Rheumatoid arthritis, Recommendations, Survey, General Practitioners.

INTRODUCTION

Rheumatoid arthritis (RA) is the most common inflammatory rheumatic disease .It is, therefore, a major concern in public health, requiring an early customized and multidisciplinary therapeutic management.

Early diagnosis and treatment are key elements in the management of patients' conditions [1]. General practitioners (GPs) play an essential role from diagnosis, follow-up to confirmation of RA in patients [2].

AIM

The aim of our study is to evaluate the modalities of RA management by GPs in Morocco in order to check their degree of consistency with the clinical good practice guidelines. This evaluation seeks to contribute to improving the quality of care service extended to patients by GPs.

MATERIALS AND METHODS

We conducted a questionnaire survey targeting the community of GPs, operating both in the public and in the private sectors in all regions of the kingdom under the aegis of the Moroccan Society of Rheumatology (SMR) with a view to assessing methods used in RA practical management.

The questionnaire was developed and validated by a committee of experts, then sent by email to all Moroccan GPs, after agreement by the Moroccan Association of GPs.The survey was conducted using Google application forms and the questionnaire was mailed-out in batches of 60 to 70 emails / day (maximum capacity for this procedure).

The questionnaire was sent between February and April 2016. Confidentiality of participants was strictly maintained. The questionnaire included multiple choices questions and one clinical case closely related to good practice guidelines.

It contained four parts

- The first part aimed at gathering information on GPs (sector of practice, number of patients with RA under supervision, seen in consultation per month and cooperation between the GP and the rheumatologist).

- The second and third parts contained items on differential RA diagnoses, additional exams warranted to support the diagnosis, early RA warning signs and therapeutic patient-centered and care approach.

- The fourth part contained multiple choices questions that emphasized RA diagnostic criteria,

- Indices for RA monitoring, conventional disease anti-rheumatic drugs (csDMARD) and biological agent biotherapies (bDMARD), and finally the GP's role in the framework of collaborative management with the rheumatologist.

We made it possible for GPs to add comments to find out the needs and wishes they sought to upgrade their skills as part and parcel of their on-going medical education.

RESULTS

Results of the first part showed that according to the latest official figures released by the Ministry of Health in June 2007, there were 9055 GPs in Morocco. The questionnaire was sent by mail to all members of the GPs' association in Morocco through Google Drive. We had 3400 mails. Out of 890 valid emails, 220 GPs responded, representing a participation rate of 24.71% (Figure 1, Table 1). Returned questions were analyzed, results were expressed as a percentage. Incomplete responses were excluded from the study. 54.1% of GPs worked in the public sector and 45.9% in the private. Mean number of RA patients seen monthly by GPs was 5.75 patients per month. (Figure2). Of all the surveyed GPs, 66.4% had a rheumatologist as a point of contact.

Only 16.7% of GPs received feedback from specialists

For the second part, the items to assess were the following: How to precisely recognize a recent RA and make an early synovitis diagnosis, delay recorded in RA diagnosis, and diagnosis of a beginning RA attack. The majority of GPs recognized synovitis by swelling, stiffness, and joint pain. (Table1). Delay in Ra diagnosis was mentioned by 43.6% of GPs to be more than 6 months, 1 year for 29.1%, 3 months for 20.5% and 2 years for 6.8% of GPs. The GPs were also given the following statement to answer: confronted with a recently occurring polyarthritis, what are the clinical elements conducive to diagnose an RA in its early stages? 75.5% of them suggested morning stiffness lasting for more than 30 min, 68.6% distal interphalangeal synovitis, 47.3% arthritis of at least 3 joints, 43.2% mentioned a positive squeez test at metacarpo-phalangeal and metatarso-phalangeal sites and 33.6% damage in the hands and feet.

In the third part, the following items were evaluated; i.e. diagnosis orientation with chronic polyarthritis; the paraclinical tests needed to help piece together a diagnosis of RA; the pathway to recognize an RA in state phase, as well as currently used diagnostic criteria of RA. When clearly facing a situation of chronic advanced rheumatoid arthritis, 94.1% of GPs reported that the most likely scenario was one of RA, 57.3% thought of systemic lupus erythematosus, 48.2% of polyarthrosis, and 17.7% of Sjorgen's syndrome. The GPs were also asked about paraclinical exams needed to support RA diagnosis. More than half of them required erythrocyte sedimentation rates (ESR), Serum C- reactive protein (CRP) levels, the rheumatoid factor antibody, anti-cyclical citrullinated peptide (anti-CCP)antibodies, antinuclear antibodies (ANA), and hands and forefeet X-rays (Figure 3).

Through a clinical case, we shared with GPs complementary examination findings as supporting evidence for a RA. The proportion of GPs who made the correct diagnosis totaled 96.4%. As for the erosive nature of rheumatoid arthritis, the proportion of GPs who knew that the presence of joint erosion should be systematically sought, that erosion was a poor prognosis factor, that it usually appeared during the first two years of RA, and that the search for erosion might require joint ultrasonography was 58.6%, 50.5%, 41.8% and 48.2%,respectively. For the currently used diagnosis criteria of RA, 40.5% of GPs opted for the ACR / EULAR 2010 criteria, 26.4% for AMOR criteria, 20.9% for Jones' modified criteria and 16.8% for the 1987 ACR criteria. Once the RA diagnosis is made, 73.6% of the physicians referred the patient to the rheumatologist after initiating treatment, 38.2% without initiating treatment, 24.5% referred the patient to an internist, 13.2% to an orthopedist, and 13.2% took care of patients with RA, themselves.

The fourth part focused on evaluating the following items: RA monitoring and evaluation tools, overall knowledge of symptomatic treatments and DMARD, the dose of corticosteroid therapy prescribed in the event of RA, first-line used DMARD, as well as the concept of window of opportunity. Also, knowledge of bDMARD marketed in Morocco that could be used in case of failure of csDMARD treatment. Awareness of the key roles that a GP must play within the framework of RA collaborative management with the rheumatologist is of paramount importance.

The drugs regarded as substantive therapy of RA were methotrexate by 90.5% of GPs, prednisone by 58.2%, salazopyrine by 50%, bDMARD by 31.4%, NSAIDs by 17.7%, and paracetamol by 9.5%. The proportion of GPs who knew that methotrexate was the most commonly used DMARD was 57.5%. The dose of corticosteroid therapy initially prescribed varied from 5 to 30 mg / day (Figure 4). When treatment with prednisone10 mg / day and methotrexate 15 mg /week was initiated, the GPs recommended monitoring of blood pressure, C-reactive protein, creatinine, liver transaminases, and full blood count (FBC) (Figure 5). In case of failure of csDMARD, a bDMARD may be proposed. The proportion of GPs who knew the biological agents marketed in Morocco was 42.7% for Adalimumab, 37.7% for Infliximab, 34.7% for Rituximab, and 27.3% for Etanercept and for Tocilizumab.

Finally, with regard to the role of GPs and within the process of RA collaborative management in tandem with the rheumatologist, 59.5% systematically referred any patient with RA to a rheumatologist, 43.2% felt that they had to make the diagnosis of RA themselves, 78 , 2% relieved the pain of the patient and left the responsibility for initiating DMARD treatment to the rheumatologist, 77.7% ensured the tolerance monitoring of medication prescribed by a rheumatologist, 68.2% managed the eventual flare-ups of the disease while waiting for the patient to consult with the rheumatologist, 54.1% managed associated co-morbidities associated with RA, and 5.9% thought they could administer a bDMARD themselves.

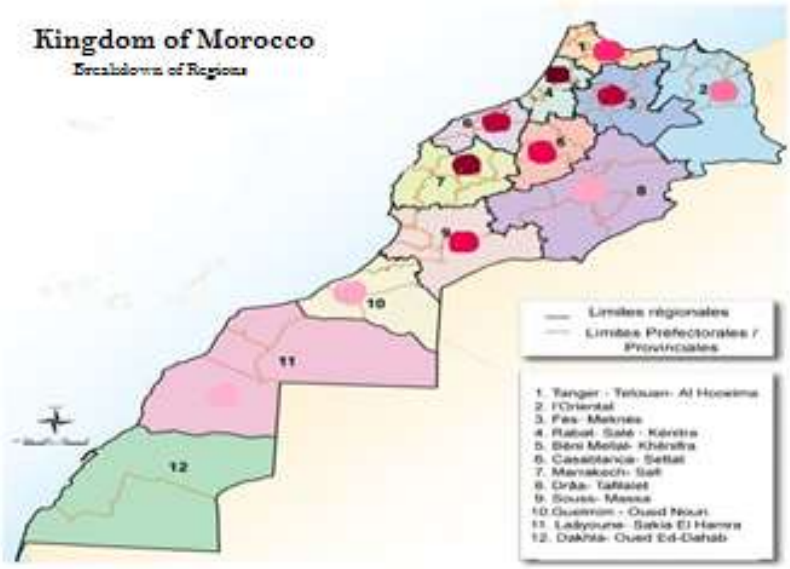

Fig-1: Breakdown of participants according to regions in the kingdom

Region	Number of participants	Percentage %
Tanger-Tétouan-Al Hoceima	12	6
Eastern Region	10	5
Fès-Meknès	23	11
Rabat-Salé-Kenitra	32	14
Béni Mellal-Khenifra	15	7
Casablanca-Settat	25	11
Marrakech-Safi	26	12
Draa-Tafilalt	6	3
Souss-Massa	19	7
Guelmim-Oued Noun	6	3
Laayoune-Saqia al hamra	2	1
Not specified	44	20

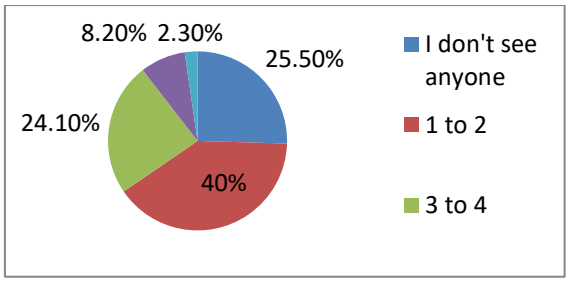

Fig-2: Breakdown of GPs according to patients seen in consultation / monthly

Table 1: Proportion of GPs who highlight synovitis

	Percentage of GPs
Joint swelling	57.5%
Joint stiffness	76.8%
Joint pain	80.5%
Joint distorsion	25.5%

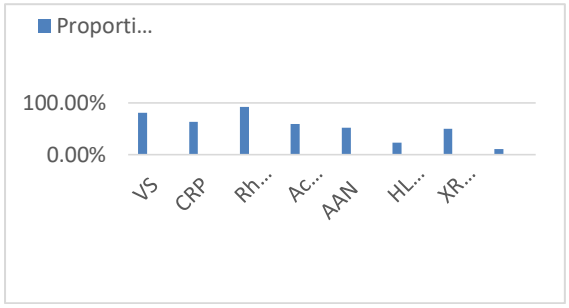

Fig-3: Proportion of GPs according to additional tests required to be performed to confirm an RA diagnosis

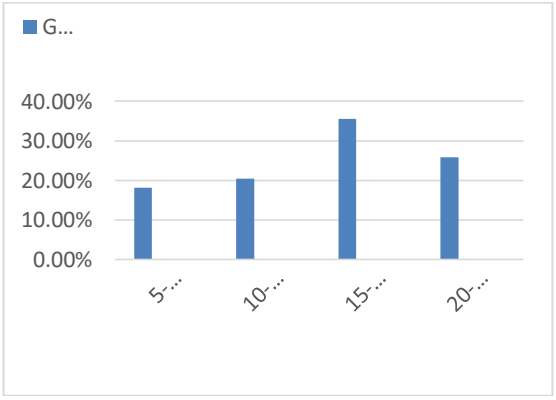

Fig-4: Percentage of GPs according to prescribed dosage of corticosteroid therapy

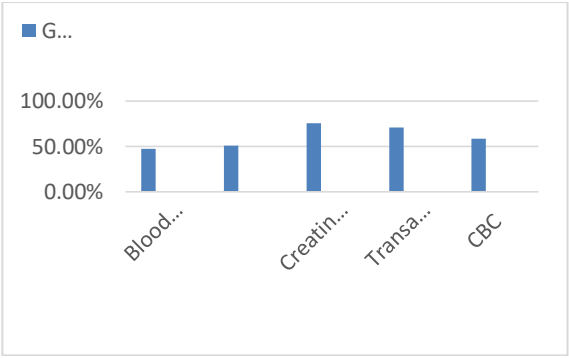

Fig-5: Percentage of GPs according to the parameters to be monitored during treatment with methotrexate

DISCUSSION

RA is a chronic inflammatory and heterogeneous rheumatism [3], whose management requires a multidisciplinary approach [4]. The GP has a key role to play in, inter alia, early diagnosis of the disease, close monitoring and patient education, especially since the number of patients with RA on average seen monthly by the GP amounted to 5.75 patients in our survey. The major findings arising from the survey objectively highlight an overall average degree of consistency with the recommendations on best practices in RA management [5].

It is necessary to stress the importance of recognizing the clinical symptoms of the onset of a recent RA. As a matter of fact, the GP should not rule out synovitis when a patient displays swelling of the affected joints, stiffness and joint pain. But it is also worth emphasizing the interest of diagnosing a beginning RA attack from the arthritis of at least 3 joints, a morning stiffness lasting more than 30mn, and pain with transverse pressure over the MCP and MTP joints. In our survey, the degree of adherence to these items remains medium to low. We found that two thirds of the GPs consider synovitis of the distal interphalangeal (DIP) joint an element to support the diagnosis of a beginning RA attack. Only one third of the GPs tend to look for damages that affect the small joints of the hands and feet to give rise to a RA diagnosis.

However, some studies have compared the degree of concordance between RA diagnosis made by GPs and rheumatologists in routine clinical practice. Over 50%of diagnoses made by GPs were altered by the rheumatologists [6-8]. Recognizing the first clinical symptoms of a beginning RA attack must be given due consideration in all the training programs of a GP. The collected data show the difficulties encountered by GPs for early synovitis detection. It is, therefore, incumbent upon learned societies to ensure and promote early RA diagnosis by GPs as part of their continuing medical education program because they are the ones who see the patient first.

With regard to the delay in diagnosis, the period before six months is referred to as “the window of therapeutic opportunity”, beyond which there is a risk of the emergence of joint erosions in the short term [9].The degree of adherence to this item was medium. However, early diagnosis and proper treatment is key to RA management [10].According to a retrospective study, the median time from onset of symptoms to the initial visit to a rheumatologist was 3months for 22.5%of patients and over 3months for 39% [2]. In another study, only 31% of patients with RA visited a rheumatologist within the 12 weeks following the onset of symptoms. This is primarily a result of the delay recorded to consult a GP [11]. In our survey, fast access to a rheumatologist is important to avoid delays in diagnosis. We must question the real motives behind delays in diagnosis, behind asking for an expert opinion from a specialist as well as the difficulties in gaining access to rheumatology consultations. Growing awareness of the need to ask for early and appropriate expert opinion must be a central and important objective in GPs’ continuing education.

Once a RA diagnosis has been made on the basis of some clinical signs, it must be confirmed by paraclinical exams. It is, therefore quite important that the RA initial assessment should encompass ACPAs testing, with regard to their sensitivity in diagnosing RA. Not only this, but radiographic evidence of the hands and the forefeet should be provided, which allow for assessment of joint damage correlated with poor clinical prognosis. The study found that half of the GPS did not request these exams in order to support their medical diagnosis. It is so easy to make the diagnosis of rheumatoid polyarthritis but to carry out an etiological survey is far from straightforward. The presence of atypical and mono symptomatic forms makes the task more difficult. That is why the GP should immediately refer any recent polyarthritis to the rheumatologist.

It is important to recognize RA in its state phase by specifying the notion of erosions, the distortions as well as the timeline of the initial onset of the symptoms. In our study, half of the GPs were aware that the presence of joint erosion needed to be sought systematically, that erosion was a poor prognosis element, that the erosions tended to usually appear during the first two years of the onset of the disease and the search for erosion might require a joint ultrasound.

Several studies have focused on the search for RA erosions in the x-rays of the front side of the feet. According to a recent survey carried out with a population with beginning inflammatory rheumatic disorders, feet erosions were found in43% of patients [12]. Indeed, erosion identification is a factor of poor prognosis. The applications of modern imaging technology, such as ultrasonography or magnetic resonance imaging (MRI) have made it possible to improve their early detection. As a matter of fact, the osteo-articular ultrasound has gained more ground in rheumatology. The majority of the currently published papers highlight its relevance for improving diagnosis, specifying the activity and tracking disease status.

The criteria, which are currently used for RA early diagnosis and for facilitating introduction of first-line treatment, are ACR – EULAR 2010. In our survey, only 40.5%of GPs are aware of these criteria. This unfamiliarity with diagnostic criteria may be due to the

absence of good dissemination of information or lack of research and self-education.

It is important to underline that the objective of RA early treatment depends almost completely on the timeliness of requests for expert advice. A medical consultation with a rheumatology physician should be undertaken as appropriate to confirm diagnosis and therefore initiate first-line treatment without delay. This quick and specialized care is only possible when GPs consider the diagnosis and refer the patient to see a specialist more quickly. In our survey, the degree of concordance with this item is medium. It is around 55.5%. Awareness of the urgent need to request early specialized expert advice continues to be an important focus for the ongoing training of GPs.

Introduction of DMARDs background therapy must be carried out as soon as diagnosis has been confirmed. The main predictive factor underlying response to beginning RA background therapy has been the duration of the disease evolution at the time disease-modifying drug treatment is initiated. In our study, the rate of adherence remains low.

Background therapy includes conventional CsDMARDs therapies and bDMARDs biotherapies. According to the clinical guidelines established by professional societies, Methotrexate is the key element in the first-line medical therapeutic strategy for patients with RA. The optimal dose must be reached within a maximum of 4to 8 weeks [14].Other CsDMARDs may be used in conjunction with this one, , due to contraindications or side effects due to methotrexate intake. In our study, even if most GPs know Methotrexate, initiating this therapy for RA treatment is at the discretion of the specialist physician. To the same end, a survey, conducted among rheumatologists operating in France, the lag time for RA diagnosis was six months on average. A background regimen was quickly initiated in 95% of the cases and Methotrexate-based in 76% of the cases[15,16].

Another very important bullet point to rise is that half of the GPs regarded prednisone as background therapy when we know that short term corticosteroids should be viewed as a liaison or add-on therapy for a maximum duration of up to six months and should be stopped as soon as possible

According to best practice recommendations, the correct dosage of steroids is ≤7.5mg/day. In our survey, the degree of adherence to this item is very low. Overall, 18.20% of our survey respondents stated that they proposed corticosteroid therapy at doses of 5 to 10mg/day. But it is necessary to affirm that one quarter of the GPs proposed corticosteroids at doses of 20 to 30mg/day, together with the inherent complications arising from a dosage taken on a long term basis. But it seems to us that the discrepancy we have been able to notice can be accounted for by the therapeutic bang in patients who are on short-term corticosteroids, especially on high doses for the control of chronic inflammatory rheumatism, inadequate guidelines dissemination outside the framework of learned societies and a lack of awareness of the guidelines due to the absence of conducting research and engaging in self-education. Along the same lines, a French survey showed that while waiting for their turn to be examined by a specialist, patients were treated by GPs. They were receiving analgesics and non-steroidal anti-inflammatory drugs (NSAIDs) in 90% of the cases, corticosteroid therapy in 26% of the cases(at a dose of 15mg/day in over 15% of them) [2].

With regard to the biotherapies, they should primarily be introduced when patients fail to achieve the set therapeutic goal from conventional background treatment of 6 months, or if they record no improvement in their health status occurring subsequent to a 3 month-treatment period. In our survey, we noticed a lack of awareness of the various biotherapies marketed in Morocco and used in RA treatment, should background treatment failure occur. Two-thirds of GPs were not aware of therapeutic innovations. It seems extra efforts are badly needed to upgrade the level of post-university ongoing medical training, with a view to improving the collaboration between specialists and GPs. As a matter of fact GPs are required to keep abreast of biotherapies introduced on the Moroccan market, which is the only way conducive to ensuring oversight of tolerance to these molecules in the frame of a multidisciplinary management approach.

In addition to monitoring RA patients under medication, standard practice requires the performance of a series of additional tests in the frame of the follow-up of a treatment involving MTX and steroid therapy, such as full blood count, liver transaminases, serum creatinine, C- reactive protein and blood pressure. In our study, the degree of adherence to this item was medium. Therefore, GPs must ensure surveillance of tolerance of such treatments in the frame of a multidisciplinary management approach.

Finally, RA is a therapeutic ‘emergency’, requiring a specialized, early, personalized and multidisciplinary management. GPs have a key role to play in Ra collaborative management involving the rheumatologist. Indeed in our survey, the degree of adherence was medium. In a clinical audit program, the authors highlighted the fact that 67% of RA background treatment follow-up was ensured by GPs, who, in most cases, wished to shoulder this responsibility. The proportion of GPs, who admitted experiencing difficulties in ensuring RA background

treatment, amounted to 41%. They all expressed their preference to have the treatment monitoring protocols and the quasi-totality among them also wished to receive a copy of the information and advice sheet given to the patient[17].

Our study has limitations. The participation rate stood only at 24.7%.The study is an opinion poll conducted on the basis of a questionnaire and it, therefore, reflects only a management intention. An analysis questionnaire of clinical practices by practitioners is not always an accurate reflection of the actual practices. And it has been shown that practitioners will reflect different attitudes toward a written or a simulated case.

CONCLUSION

General practitioners' practices regarding RA management seemed to be poorly consistent with the recommendations on best practices in most of the studied items. As a matter of fact, the gap was more marked on items in connection with synovitis diagnosis, on the deadline for early RA diagnosis, and on collaborative management modalities with the rheumatologist. Differences were also observed in corticosteroid prescription when treatment was initiated.

Consequently, more awareness-raising is needed by GPs so that they can ensure their roles optimally in collaboration with the specialists.

Currently, there is talk about coordinated care pathways where GPs can play a key role. The new reform of medical studies makes it possible to define the new GP's prerogatives in the context of family-based medicine. This reform aims to determine new institutional goals through the training of future family doctors according to the epidemiological statistics of the kingdom and according to the health needs of citizens.

Finally, a top priority consists in finding the best ways to create a better synergy mechanism between the GP and the specialist physician. This reflection starts with raising questions in connection with the GPs' needs in terms of training, access to telephone advice or rapid consultation and by defining common management strategies in case care is shared.

Identifying the overall quality of health care provided by specialists would immensely contribute to facilitating coordination of the work of the various players [18].

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