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Brief Report

Mutilating/Resorptive Arthritis. A Study of 24 Patients in a Series of 360 Patients With Psoriatic Arthritis☆

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ABSTRACT

Objective: To describe a large series of patients with mutilans/resorptive arthritis (AM) of a representative population of patients with psoriatic arthritis (PsA) and analyze the associated variables.
Methods: Multicenter cross-sectional study of consecutive patients affected by PsA in 8 centers. In patients with swelling or deformity of the hands or feet we performed an anteroposterior rx. The patient was affected by AM if erosive disorder affecting both articular surfaces completely was present.
Results: Of the 360 patients studied, 24 had PsA and AM (6.7%). The duration of their disease was significantly higher, and they exhibited a worse functional capacity as well as more DIP joint affection ($p < .05$). 30% had radiological changes indistinguishable from nodular osteoarthritis.
Conclusions: AM in PA is associated with a worse functional capacity. Its possible association with nodular hand osteoarthritis deserves further study.

Artritis mutilante/resortiva. Estudio de 24 pacientes de una serie de 360 artritis psoriásicas

Palabras clave:
Artritis psoriásica
Artritis mutilante
Artropatía resortiva

RESUMEN

Objetivo: Describir una serie amplia de pacientes con artritis mutilante/resortiva (AM) de una población representativa de pacientes con artritis psoriásica (APs) y analizar las variables asociadas.
Métodos: Estudio transversal multicéntrico que incluyó de forma consecutiva a los pacientes afectados de APs de 8 centros. A aquellos pacientes con tumefacción o deformidad de manos o pies sospechosa de se les realizó una radiografía antero-posterior. Se consideró que el paciente estaba afectado de AM si presentaba un trastorno erosivo que afectaba totalmente ambas superficies articulares.
Resultados: De los 360 pacientes con APs estudiados, 24 presentaban AM (6,7%). La duración de la enfermedad fue significativamente mayor y presentaban una peor capacidad funcional, así como una mayor afección de IFD ($p < 0,05$). En un 30% se detectaron cambios radiológicos indistinguibles de una osteoartritis nodular.
Conclusiones: La AM en la APs se asocia a una peor capacidad funcional. Su posible asociación con la osteoartritis nodular de manos merece más estudios.

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Table 1
Comparison Between Groups of Affected Patients With PsA With and Without Juxtaarticular Bone Resorption.

Variable	Arthritis Mutilans/Resorptive Arthropathy (n=24)	No Arthritis Mutilans/Resorptive Arthropathy (n=336)	*P*
Age	56.3 ± 12.5	53 ± 13.9	.262
Age at onset of arthritis	38.9 ± 13	41.5 ± 14.3	.411
Age at onset of psoriasis	35.6 ± 14.8	34.9 ± 16	.828
Gender (male/female)	12/12 (50)	166/170 (49.4)	.955
Duration of arthritis (years)	17.7 ± 9.9	11.5 ± 9.3	.002
Duration of psoriasis (years)	20.8 ± 11.8	18.3 ± 12.6	.334
Spondylitis	5 (21.7)	53 (17)	.566
History of dactilytis	14 (58.3)	137 (44.1)	.175
Affection of distal interphalangeal joints	17 (70.8)	97 (31.7)	.000
Nail disease	10 (55.5)	161 (55.5)	.997
CRP (mg/l)	15.7 ± 13.6	11.5 ± 13.1	.179
ESR	29 ± 20.1	22.3 ± 15.5	.055
Painful joints	6.7 ± 7.8	4.6 ± 6.2	.138
Swollen joints	1.1 ± 1.6	1.6 ± 3.4	.442
Positive HLA B27	4 (19)	50 (17)	.856
Treatment with low dose steroid	6 (25)	72 (21.4)	.682
mHAQ	1.3 ± 0.8	0.6 ± 0.6	.001
Functional scale (ACR)			
I + II	17 (80.9)	300 (93.7)	.05
III + IV	4 (19.1)	20 (6.3)	

Introduction

In the first descriptions of psoriatic arthritis (PsA),[1,2] Wright described a subtype of patients who had involvement of the distal interphalangeal joints with erosion and resorption of the joint ends and a characteristic shortening of the fingers that he called mutilating arthritis (MA). Apart from the first PsA series published by Wright,[1,2] few studies[3–6] have mentioned these mutilating forms. In the largest series PsA published to date,[4,7–11] the prevalence varies enormously, ranging between 2% and 23%.

There is some confusion in the terminology used ("opera-glass hand syndrome,"[12], "main in lorgnette,"[13] "arthritis mutilans" or "resorptive arthropathy"[5]).

The objective of this study was to describe the frequency of MA and study its relationship with other variants of PsA.

Patients and Methods

This was an observational, cross-sectional multicenter PsA study performed in 8 rheumatology centers. All patients met CASPAR[14] criteria. The recorded variables are shown in Table 1. We performed an anteroposterior X-ray of the hands and feet in those patients with clinical deformity indicative of MA (shortened fingers) or clinical signs of inflammatory activity in these locations. The patient was considered as having resorptive arthropathy if hands and feet radiographs showed at least one joint with both bone ends shortened without osteophytes.

Statistics

We used the chi-square or Fisher's exact test for categorical variables. For quantitative variables we used and Student *t* and Mann–Whitney nonparametric tests.

We performed a multivariate logistic regression analysis by the "forward stepwise" method, which showed a tight association of the duration of arthritis, and distal interphalangeal and mHAQ condition variables.

Results

Twenty-four patients (6.7%) were diagnosed with MA. The description of the patients is shown in Table 2. The analysis of the different variables in the subgroup of patients with bone resorption and the rest of the patients in the PsA series are shown in Table 1. The duration of arthritis was significantly greater ($p < .05$) in patients with bone resorption. The distal interphalangeal involvement was significantly more common in patients with resorptive changes ($p = .00$).

Functional capacity was worse in this subset of patients, both in the case of that perceived by the physician as well as that according to the ACR scale ($p = .05$) and self-perceived by the patient in the self-administered mHAQ questionnaire ($p = .001$). We observed a higher concentration of MA in tertiary health centers ($p = .015$).

Multivariate analysis showed an association between independent variables of duration of arthritis, distal interphalangeal condition and mHAQ with regard to the dependent variable (presence or absence of MA).

Discussion

The term "arthritis mutilans" generally refers to severe deformities and recalls the "opera glass syndrome" appearance of multiple shortened fingers. But sometimes the resorptive process is not as marked as we have shown in this study, because one third of our patients had less than 3 affected fingers. When the process is limited to the feet it may go unnoticed and 20% in our series had a resorption process limited to the feet. For this reason, we believe that the term "resorptive arthropathy", based on the X-ray image and coined by Swezey et al.[5] better reflects the nature of the process. The "opera glass hand" deformity would be the final stage for some patients where juxtaarticular bone resorption is more severe.

The exact prevalence of MA/resorptive arthropathy in PsA shows very different results that we believe are due to the very heterogeneous definitions used in published series. Our prevalence is slightly higher than other series (6.7%) because we believe that we have included milder forms manifested only in X-rays. When only considering the "opera glass syndrome", the prevalence in our series is 1.94% and if we take into consideration only those patients who are clinically shown to have shortening of any finger, the frequency of hand or foot affection is 4.4%. When compared with larger and recent ones,[4] which use expert opinion consensus or the CASPAR definition of 'arthritis mutilans', prevalence is 3.7%.

Most of the joint pattern involved is polyarticular and symmetrical, as we and other authors[4] have shown. We have to note that 12.5% of our patients with MA/resorptive arthropathy have an oligoarticular form.

Table 2
Description of 24 Patients Affected With Arthritis Mutilans/Resorptive Arthropathy.

Patient	Sex	Age	Age at Onset of Psoriasis	Duration Psoriasis	Age at Onset of Arthritis	Duration Arthritis	Pattern of Peripheral Arthritis	Resorption < 3 Digits	Single Resorption	"Opera glass hand"	Solo Pies	X-ray Signs of Nodular OA	Distal Interphalangeal	Axial Affection	HLA B27+	Steroids
EBM	Male	52	17	35	29	23	Polyart				+		+	+		+
JCV	Male	30	10	20	13	17	Polyart	+					+			
JCT	Male	54	29	25	41	13	Oligoart				+		+	+		
MPP	Female	51	14	37	28	23	Polyart			+			+		?	
CCF	Female	45	24	21	27	18	Polyart						+			
EGC	Female	48	14	34	28	20	Polyart	+	+				+			+
MTR	Female	65	50	15	49	16	Polyart					+	+			+
RRT	Female	71	47	24	46	25	Polyart			+			+			
PRM	Male	63	51	12	48	15	Polyart	+							+	
AGC	Female	64	25	39	48	16	Polyart			+						
PLM	Female	49	35	14	35	14	Oligoart			+	+				?	
DPO	Female	77	33	44	63	14	Polyart			+		+	+			+
RRS	Female	45	20	25	22	23	Polyart	+			+		+		+	
JMR	Male	47	35	12	33	14	Polyart				+			+	+	
RBQ	Male	75	41	34	46	29	Polyart			+				+		
AVR	Male	65	52	13	58	7	Polyart		+				+	+		+
MCB	Female	45	31	14	33	12	Polyart	+	+			+	+			
ARM	Male	65	64	1	58	7	Polyart	+					+	?		+
FCA	Female	56	36	24	39	24	Polyart			+		+				
ABP	Female	53	44	9	27	26	Polyart	+				+			?	
JAGF	Male	46	40	6	40	6	Oligoart	+					+		+	
CLS	Male	60	50	10	56	4	Polyart	+					+			
AHC	Male	46	40	6	39	7	Polyart	+				+	+			
ARA	Female	80	54	26	29	51	Polyart					+	+			

OA: nodular osteoarthritis; Oligoart: oligoarticular; Polyart: Polyarticular.

We also observed an association with a longer duration of arthritis, distal interphalangeal involvement and a worse functional capacity measured by the HAQ score and ACR functional scale. CASPAR[4] study data also show an association with increased duration of arthritis, but instead do not show a worse functional capacity according to the HAQ score. The fact that it is associated with a longer duration of arthritis can lead one to believe that MA/resorptive arthropathy is a consequence of the inflammatory process in time longer.

One of the incidental findings that was striking in our study is the high frequency (30%) of the association findings of MA and nodular osteoarthritis. The prevalence of nodular osteoarthritis in normal population over 40 years is less than 8.5%.[15] We have not found any publication describing this association.

Ethical Aspects

Protection of Persons and Animals. The authors declare that the procedures performed conformed to the ethical rules of the human experimentation committee and were in accordance with the World Medical Association and the Helsinki declaration.

Data Confidentiality. The authors declare that all protocols for publication of patient data in their center were followed and all patients included in the study received sufficient information and gave their informed consent in writing in order to participate in the study.

Right to Privacy and Informed Consent. The authors obtained informed consent of the patients and/or subjects referred to in the article. This corresponding author is in possession of this document.

Conflict of Interest

The authors have no conflict of interest to make.

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