

# Correspondence

## INSTRUCTIONS FOR LETTERS TO THE EDITOR

Editorial comment in the form of a Letter to the Editor is invited; however, it should not exceed 800 words, with a maximum of 10 references and no more than 2 figures (submitted as camera ready hard copy per Journal Guidelines) or tables and no subdivision for an Abstract, Methods, or Results. Letters should have no more than 4 authors. Full name(s) and address of the author(s) should accompany the letter as well as the telephone number, fax number, or E-mail address.

Contact. The Managing Editor, The Journal of Rheumatology, 365 Bloor Street East, Suite 901, Toronto, ON CANADA M4W 3L4. Tel: 416-967-5155; Fax: 416-967-7556; E-mail: jrheum@jrheum.com Financial associations or other possible conflicts of interest should always be disclosed.

## Subclinical Atherosclerosis in Systemic Lupus Erythematosus

To the Editor:

We read with interest the editorial by Ahmed and Bruce<sup>1</sup> and the article by Wolak, *et al*.<sup>2</sup> We recently used carotid artery ultrasonography in premenopausal female patients with systemic lupus erythematosus (SLE) and in age-matched controls, to detect carotid plaques, to evaluate risk factors associated with atherosclerosis, and to identify clinical and laboratory variables related to the presence of carotid plaques in these women.

Our study included 26 SLE patients and 20 female controls who underwent carotid ultrasound. All the SLE patients met American College of Rheumatology criteria for the classification of SLE<sup>3</sup>. Carotid intima media wall thickness (IMT) was measured in both left and right common carotid arteries using an HDI 1500 (ATL, Bothell, WA, USA) equipped with a 12.5 MHz vascular transducer. The main clinical features of the lupus patients at any time during the disease were: pancytopenia, serositis, polyarthritis,

hemolytic anemia, thrombocytopenia/leukopenia, renal failure, nephrotic syndrome, cerebrovascular disease, cognitive dysfunction, and photosensitivity.

At the time of ultrasonography study, lupus patients were receiving oral prednisone, azathioprine, nonsteroidal antiinflammatory drugs, cytotoxic drugs, and hydroxychloroquine. Demographic and atherosclerotic risk factors of patients with SLE and controls are shown in Table 1. Compared with controls, SLE patients had greater carotid IMT, total cholesterol, triglycerides, and hypertension. Age, body mass index (BMI), LDL cholesterol, HDL, and C-reactive protein (CRP) of patients and controls were not statistically different. Seven (26.9%) of 26 patients showed carotid plaques, compared with only one (5%) of 20 controls. One patient from each group had past or present smoking history.

Comparison of patients with and without carotid plaques (Table 2) showed a significant difference only in age (41.8 vs 30.6 years; *t* test, *p* = 0.006). Five of 7 patients with carotid plaques had moderate levels (20–80 U) of IgG cardiolipin antibodies (Relisa Cardiolipin IgG and IgM, Immuno Concepts, Sacramento, CA, USA) and 2 had low levels (5–20 U). Of the 7 patients with carotid plaques none had received cytotoxic drugs, while 7 of 19 patients without plaques had received cytotoxic agents (Fisher's exact test, *p* = 0.000). Variables significantly associated with carotid plaques by logistic regression analysis included age (OR 5.15, 95% CI 0.36–72.7, *p* = 0.001) and presence of anticardiolipin antibodies (OR 1.38, 95% CI 0.82–2.3, *p* = 0.008).

In our study, subclinical atherosclerosis in premenopausal SLE patients was not related to traditional cardiovascular risk factors. Clinical or serologic measures of disease activity or serum levels of CRP were not significantly different, although all measures were obtained at the time of ultrasonography. As reported by Roman, *et al*<sup>4</sup> and Asanuma, *et al*<sup>5</sup>, we also found that longterm therapy with corticosteroids was not associated with a significantly increased risk for carotid atherosclerosis. Plaques were more common among patients who had not received aggressive therapy with cytotoxic drugs than in those who had. Finally, a logistic regression model identified age and antiphospholipid antibodies as risk factors for atheroma.

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Table 1. Demographic and atherosclerosis risk factors of patients with SLE and controls. Values are mean  $\pm$  standard deviation (SD).

	SLE, n = 26	Controls, n = 20	p
Age, yrs	33.6 $\pm$ 9.7	29.2 $\pm$ 6.0	0.08
Body mass index, kg/m <sup>2</sup> body surface	25.6 $\pm$ 6.0	25.0 $\pm$ 4.1	0.70
LDL, cholesterol, mg%	110.3 $\pm$ 35	95.7 $\pm$ 20.4	0.10
Total cholesterol, mg%	183.5 $\pm$ 40	159.6 $\pm$ 25	0.02
HDL, mg%	43.8 $\pm$ 13	49.4 $\pm$ 10.4	0.11
Triglycerides, mg%	145.3 $\pm$ 68	74.5 $\pm$ 40	0.001
Systolic blood pressure, mm Hg	122.7 $\pm$ 19	108.7 $\pm$ 8	0.004
Diastolic blood pressure, mm Hg	79.3 $\pm$ 11	69.5 $\pm$ 8	0.001
Intima media thickness, mm			
Left common carotid artery, mm	0.62 $\pm$ 0.11	0.48 $\pm$ 0.05	0.001
Right common carotid artery, mm	0.55 $\pm$ 0.08	0.46 $\pm$ 0.05	0.001
C-reactive protein, mg/l	6.9 $\pm$ 3.7	6.0 $\pm$ 0	0.25
Carotid plaques (%)	7 (26.9)	1 (5)	

Table 2. Clinical and laboratory findings of patients with SLE with and without plaques. Values are mean  $\pm$  SD.

	With Plaques, n = 7	No Plaque, n = 19	p
Age, yrs	41.8 $\pm$ 4.4	30.6 $\pm$ 9.4	0.006
Body mass index, kg/m <sup>2</sup> body surface	25.4 $\pm$ 1.1	25.8 $\pm$ 8	0.89
Total cholesterol, mg%	167.9 $\pm$ 23.9	189.3 $\pm$ 43.5	0.23
LDL cholesterol, mg%	99.3 $\pm$ 17.5	114.5 $\pm$ 39	0.42
Anticardiolipin (GPL)	31.4 $\pm$ 22	21.2 $\pm$ 24	0.33
Anticardiolipin (MPL)	5.0 $\pm$ 0.0	11.4 $\pm$ 14.2	0.24
Systolic blood pressure, mm Hg	122.3 $\pm$ 19.2	123 $\pm$ 20	0.94
Diastolic blood pressure, mm Hg	79 $\pm$ 13	79 $\pm$ 10.4	0.86
Anti-DNA*, IU/ml	16.7 $\pm$ 17.2	31.5 $\pm$ 19.6	0.09
SLICC	0.14 $\pm$ 0.38	0.95 $\pm$ 1.7	0.22
Mex-SLEDAI	2.4 $\pm$ 2.3	2.8 $\pm$ 2.3	0.72
SLE duration, yrs	10.1 $\pm$ 4.5	6.4 $\pm$ 6.0	0.13
Prednisone, mg	8.6 $\pm$ 11.9	9.3 $\pm$ 7.3	0.84
C-reactive protein, mg/l	8.6 $\pm$ 6.8	6.3 $\pm$ 1.4	0.18

SLICC: SLE International Collaborating Clinics/ACR Damage Index; Mex-SLEDAI: Mexican SLE Disease Activity Index. \* EIA: enzyme immunoassay (reference 0–3.0 IU/ml).

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## Drs. Ahmad and Bruce reply

To the Editor:

We thank Drs. Mercado and Avendaño for their interest in our recent editorial<sup>1</sup> and for sharing their own data relevant to this question. Their comparison between systemic lupus erythematosus (SLE) and controls is typical of many other studies in that they find an excess of metabolic risk factors in their SLE population as well as a higher prevalence of markers of early atherosclerosis.

In agreement with our opinion, they found that increasing age was the most significant factor associated with plaque development in SLE patients<sup>1</sup>. Their data also suggest a contribution to atherosclerotic risk of the presence of antibodies to cardiolipin as well as a lack of previous exposure to cytotoxic therapy. These latter 2 observations are of particular interest. Controversy continues as to the importance of anticardiolipin antibodies to atherogenesis in SLE, but several studies suggest that certain subtypes of anticardiolipin antibody may be of particular relevance. This area needs further attention<sup>2,3</sup>. Equally, the role of aggressive therapy for SLE is of intense current interest<sup>4</sup> and it may be that such aggressive therapy early in the disease “resets” the vasculature in a way that makes it less susceptible to the development of atherosclerosis in the long term.

Clearly, larger studies are required to delineate further the contribution of lupus associated factors to atherosclerosis. Our colleagues’ preliminary data add some intriguing observations to our body of knowledge.

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## Dr. Abu-Shakra replies

To the Editor:

It is no longer a matter of dispute that patients with systemic lupus erythematosus (SLE) have an increased risk of developing clinical and asymptomatic cardiovascular disease, particularly before the age of 50<sup>1</sup>. The results of the work of Drs. Mercado and Avendaño support our published data. However, we identify differences between the studies.

Our controlled study showed that patients with SLE have a 3.17-fold increased rate of atherosclerotic plaques in the carotid and femoral arteries compared with controls<sup>2</sup>. Drs. Mercado and Avendaño report that SLE patients had a higher rate of carotid plaques and greater carotid intima media thickness (IMT) compared to controls. Our data and data of a large study from New York<sup>3</sup> have not shown a difference between SLE cases and controls in the measurements of IMT.

This difference is related mainly to sample size and selection bias. In Mercado and Avendano’s study only 26 SLE patients were included and the number of controls was 20. This discrepancy suggests that there were SLE patients without matched controls. Mean total cholesterol, triglyceride level, and mean systolic and diastolic blood pressure were significantly higher in SLE cases versus controls, indicating that cases and controls were not tightly matched by conventional atherosclerosis risk factors. In addition, there was a trend suggesting controls were younger than cases by 4 years. All of these variables most likely contributed to the higher IMT measurements observed in the SLE patients.

We have shown in a multivariate model that the development of plaques is associated with age, particularly in those older than 50 years (odds ratio 2.66,  $p < 0.001$ ). The authors report that plaques were significantly associated with age and presence of anticardiolipin antibodies. This should be interpreted with caution, since 1 is included in the range of the 95% confidence intervals of the odds ratios. Again only 7 SLE patients had

plaques, suggesting it is extremely difficult to perform clinically significant analyses on a very small number of cases.

Despite these limitations, the data of their study support that atherosclerosis occurs prematurely in patients with SLE. We suggest that early detection and management of traditional cardiovascular risk factors may have an important role in improving the survival of patients with SLE. Closely monitoring blood pressure (below 130/80), and LDL level (below 100 mg/dl) is a reasonable measure in patients with SLE. In addition, controlling the levels of triglycerides and homocysteine is also crucial<sup>4</sup>.

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## Temporal Arteritis Associated with Systemic Necrotizing Vasculitis

To the Editor:

I read with interest the report of 7 cases of temporal arteritis in patients with systemic vasculitis without classic giant cell arteritis<sup>1</sup>. Non-giant cell arteritis, such as necrotizing vasculitis, polyarteritis and "hypersensitivity" angiitis, have been reported to involve the temporal arteries much earlier than the reports quoted by Hamidou, *et al*<sup>2-6</sup>. The prognosis of those patients with non-giant cell arteritis may be less favorable, probably due to the less beneficial effect of single-corticosteroid therapy on the course of polyarteritis<sup>6</sup>. Clinicians and histopathologists should be aware of the possibility of non-classic giant cell arteritis in elderly patients presenting with temporal arteritis. A temporal artery biopsy should be performed in patients with temporal arteritis, as patients with systemic necrotizing vasculitis may require cytotoxic drugs in addition to corticosteroids.

I reported the case of a female patient who, at the age of 50 years, developed biopsy-proven classic polyarteritis nodosa, from which she made a full recovery, and was taken off corticosteroids 22 months after onset<sup>7</sup>. Sixteen years later, she developed classic giant cell arteritis with typical histological findings. This patient had characteristic clinical and histological findings of both diseases, but at a 16-year interval. This may be a chance finding.

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## Dr. Hamidou replies

To the Editor:

We thank Dr. Jawad for his remarks on non-giant cell temporal arteritis<sup>1</sup>. The overall prognosis of these patients may be effectively less favorable if other sites are involved, and clinicians must be aware of renal, cardiac, digestive, or central nervous system involvement, defining requirements of the "five factors score"<sup>2</sup>, and requiring cytotoxic drugs. Curiously, in the literature and in our experience, visual disturbances are rare in these settings and blindness exceptional. Histopathologically, fibrinoid necrosis of temporal artery is unusual in classical giant cell arteritis, and it could be a suggestive element of systemic necrotizing vasculitis<sup>3</sup>. Several descriptions of association of giant cell temporal arteritis and necrotizing vasculitis have been reported<sup>4</sup>, without any proved pathogenic relationship.

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## Silicone Breast Implants

To the Editor:

The 2 letters<sup>1,2</sup> in the May issue of *The Journal* about breast implants are unscientific and silly. They point up the variation that can occur even in a series, and refer to subjective reports that have no meaning. Chronic fatigue syndrome and fibromyalgia cannot be verified and women who have cosmetic breast implants differ from those who don't, and those who have implants after mastectomy have other things to worry about and cannot be compared to women who have not had cancer. The article under discussion<sup>3</sup> and the letters in response serve to confuse and add nothing to our knowledge. Let's get back to science-based medicine.

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## Dr. Rothschild replies

*To the Editor:*

Comments by Dr. Ehrlich may not always be what they seem. While he expresses disbelief in fibromyalgia, he has a unique way of making people think. This is exemplified by an incident during the Paris ILAR meeting. Dr. Ehrlich treated me to a walking tour of Paris, emphasizing the architecture in the city of his youth. We were discussing other matters and I recall us transiting a walled area and being surrounded by gendarmes. My memory was that Dr. Ehrlich had taken me to the Pompadour palace, without prior warning, perhaps for the impact of the experience?

I have known Dr. Ehrlich for decades and have always appreciated our many stimulating discussions. Somehow, we never talked about fibromyalgia. While his comment is valid with respect to verifying complaints of chronic fatigue, his perspective of fibromyalgia must be challenged. Documentation of trigger/tender points (in the absence of neutral point tenderness) is a valid diagnostic tool, when the examiner has been adequately trained<sup>1</sup>. And that is a serious concern<sup>2</sup>. Fibromyalgia must, of course, be distinguished from the general body pain phenomenon, which is unrelated to fibromyalgia and should not be used as a diagnostic label to dismiss the patient<sup>3</sup>. We must assure that those using the term "fibromyalgia" use it appropriately<sup>4</sup>.

Preconceived notions certainly compromise our approaches. While mastectomy for cancer gives patients "other things to worry about," are their symptoms truly different from those in women who have had augmentation procedures? Actual analysis<sup>5,6</sup> reveals that they do have more anxiety and nonpleuritic chest pain than those who simply had a cosmetic procedure, but these were no different from those who had mastectomy for fibrocystic disease. Both of those groups actually had less fatigue and lower Health Assessment disability indexes than did individuals who had surgery of purely cosmetic indications. Surgery on the breast itself, not the threat of cancer, would seem to be the issue. The fibromyalgia suffered by implant patients is no different from that in the general population, just more frequent. And that frequency was independent of cosmetic or cancer surgery indication.

Variation, which can occur even in a series, is what statistics addresses, not a reason for discarding statistically significant results in a study. We all have concerns, at least with respect to some statistical techniques/procedures. Intention to treat-based analysis is perhaps the most problematic to clinicians. However, Dr. Ehrlich is right. It is time to stop being silly and unscientific. It is time to set standards for training to assure that those who apply or deny the label "fibromyalgia" actually are qualified to do so.

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## Dr. Vermeulen replies

*To the Editor:*

We thank Dr. Ehrlich for his contribution to the scientific discussion.

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## Dropped Head: An Unusual Presentation of Dermatomyositis

*To the Editor:*

Muscle weakness is a cardinal feature of idiopathic inflammatory myopathies that triggers further investigations and proper diagnosis by high serum levels of muscle enzymes, characteristic electromyography (EMG), and muscle biopsy<sup>1</sup>. Most patients with bilateral, symmetric, progressive, proximal weakness leading to difficulty getting up out of a chair or combing their hair are usually diagnosed within weeks or months from onset of complaints, while those presenting with atypical weakness may go undiagnosed, and subsequently untreated, for years.

We describe a case of dermatomyositis with prominent weakness of axial musculature and resultant dropped head syndrome. While neck flexor involvement with difficulty in raising one's head from a pillow is a known manifestation of inflammatory myopathy<sup>2</sup>, a weakness of neck extensors with dropped head has not been previously reported, to our knowledge, as a presenting feature of dermatomyositis.

A 66-year-old Caucasian woman first presented in March, 2003, with a 4-month history of difficulty in maintaining her head erect. Her muscle strength was estimated as 2/5 for neck extensors and 4/5 for deltoid muscles, with other muscle groups normal. EMG revealed C6 radiculopathy with no myopathic changes. Computer tomography (CT) and later magnetic resonance imaging (MRI) of the C-spine showed degenerative changes of the C3-C7 segments with minimal spinal stenosis, which was not felt to explain the patient's complaints. Final diagnosis was deferred.

In September 2003 the patient was reevaluated because of worsening weakness of the neck with complete inability to hold her head up and proximal weakness of both upper and lower extremities. She had a waddling gait with dropped head and declined her torso in a sway back posture to allow her to see where she was walking. The review of systems revealed



mild dysphagia, Raynaud's phenomenon, and weight loss of about 20 kg since onset of symptoms 9 months earlier. Her medications were amitriptyline 25 mg, cimetidine 400 mg, and calcium carbonate 600 mg. Physical examination was remarkable for complete head drop, weakness of the neck extensors 0/5, left deltoid 3/5, right deltoid 4/5 and bilateral iliopsoas 3/5, violaceous rash over her forehead, upper back, chest, thighs, metacarpophalangeal and proximal interphalangeal joints, and lesions compatible with Gottron papules. She had periungular telangiectasia and taut skin on her distal fingers.

Routine laboratory studies, including complete blood count, serum creatinine, electrolytes, proteins, thyroid and liver function tests, were normal. CPK level was 419 U/l (normal range up to 100 U/l), lactate dehydrogenase was 344 U/l (normal range up to 240 U/l). C-reactive protein was 9.3 (normal up to 6) and erythrocyte sedimentation rate was 55 mm/h. Antinuclear antibody test was weakly positive in a nucleolar pattern, while extractable nuclear antigen (ENA) screen including anti-Jo-1 antibodies, as well as rheumatoid factor and antibodies to acetylcholine receptor were negative; serum complement levels C3 and C4 were normal. Extensive investigations to rule out underlying malignancy were negative. EMG of the right deltoid, splenius capitus, and semispinalis muscles showed no spontaneous activity with fast recruitment of small, short, and polyphasic units. A biopsy of the left deltoid muscle was performed and revealed atrophic degenerative and necrotic fibers with foci of inflammatory infiltrate, composed of both T and B cells, compatible with dermatomyositis.

Dermatomyositis was diagnosed and the treatment with 1 mg/kg/day steroids and 15 mg of methotrexate (MTX) weekly was started. Two months later, monthly intravenous immunoglobulin (IVIG) was added to her treatment due to failure to improve. The patient reported gradual improvement in muscle strength since starting IVIG, which allowed tapering of her steroid dose. On reevaluation in June, 2004, she was able to hold her head straight up with no help and had returned to an active lifestyle. Her rash had disappeared and serum muscle enzyme levels were normal.

Restricted or isolated weakness of the extensors of the neck is a relatively rare condition, designated the dropped head syndrome, generally seen as a part of generalized neuromuscular disorder such as myasthenia gravis or amyotrophic lateral sclerosis<sup>3-5</sup>. The dropped head is not widely described as a manifestation of rheumatic disease, despite the presence of inflammatory myopathies in the list of differential diagnoses<sup>4</sup>. Reported cases of dropped head plus syndrome, characterized by the predominant

weakness of neck extensors with restricted involvement of other proximal musculature, and biopsy varying from scattered interstitial inflammatory infiltrate to rich lymphocytic infiltration, may represent an early stage of polymyositis. These patients may have a good response to glucocorticosteroids and/or azathioprine with improvement of their muscle strength<sup>6-8</sup>.

This case shows that the dropped head syndrome may also be an early and disabling symptom of dermatomyositis, still reversible with aggressive treatment. Awareness of such an unusual manifestation of inflammatory myopathy should advance diagnosis and antiinflammatory therapy and improve the overall prognosis of such patients.

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