

Developing radiological erosions in inflammatory connective tissue disease. Introducing: secondary erosive arthritis in primary Sjögren´s syndrome

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Background

Systemic and non-systemic inflammatory connective tissue diseases (CTDs) are usually diagnosed using classification criteria since there is no known pathognomonic clinical test. Such criteria sets were developed by the American College of Rheumatology (ACR) for many CTDs. If a certain number of criteria are fulfilled, the patient is classified as having that disorder. The classification criteria are mainly developed for and used in clinical multicentre trials or other scientific projects to ensure some homogeneity of the patient material. As internationally agreed classification criteria do not exist, the ACR criteria are used in most countries in the world. This is especially true for rheumatoid arthritis (RA) (1) and systemic lupus erythematosus (SLE) (2).

Epidemiological studies aimed at determining the prevalence of primary Sjögren's syndrome (SS) show that this systemic CTD occurs with a prevalence of 0.4 - 4.8% (3). These figures are higher than the steadily falling current prevalence figures for RA - 0.5% (4). RA has usually been considered to be the most common of the inflammatory CTDs. Since the mid-seventies, when the first classification criteria for primary and secondary SS were used, seven different classification criteria for SS have been introduced. Their similarities and advantages as well as their dissimilarities and disadvantages have been discussed (5, 6). At present the criteria most used to diagnose SS are the preliminary European classification criteria (7, 8), which consist of a mixture of subjective complaints and abnormal objective test results. From the very beginning of an SS diagnosis, it was obvious that one should distinguish between primary SS and secondary SS (5). The reason for making this distinction was stressed when it was shown that some of the pathoimmunological mechanisms involved such as HLA tissue types (9) were different between primary and secondary SS. Consequently this could lead to various rational pharmacotherapeutic treatments for primary or secondary SS, and even different treatments for the various secondary SS, depending on the main CTD.

Problem

Experienced rheumatologists have known for years that the clinical history of a patient may fulfil one or more sets of classification criteria, although the clinical picture during disease progression may only be compatible with one disease. Some patients can be classified as having overlap syndromes (10). It can be more problematic for patients who for years have fulfilled the criteria for a certain diagnosis, "Y", and much later develop new symptoms characteristic of another disorder. Such patients would then fulfil a further set of diagnostic criteria for another CTD. Should such patients now be given a new CTD diagnosis, "Z", and be treated following what is considered to be the state of the art for this second disease? Or should we call them overlap syndromes followed by the names of the sets of classification criteria, which are now fulfilled such as overlap "Y" + "Z" or should we continue to call them "Y" adding "with secondary Z"? And how do we treat them, if the diseases "Y" and "Z" ought to be treated differently?

Example

A 45-year old woman with a 7-year history of extraordinary fatigue, followed by symptoms of dry eyes and dry mouth, wrist arthralgia, some morning stiffness in MCP and PIP joints (less than 1 hour), now and then with exudation. X-ray examinations of hands, wrists and feet were normal.

When seen for the first time, keratoconjunctivitis sicca and stomatitis sicca could be objectively verified, and during the next 5 years she was followed as a primary SS outpatient. After five years, her hand arthralgia became more intense and x-ray showed development of one single erosion. For years, the patient had a positive IgM-RF (rheumatoid factor) as do many Sjögren's patients. HLA type is not known. Her rheumatologist told her that she was suffering from rheumatoid arthritis.

Should this patient be told that she is now suffering from erosive rheumatoid arthritis with secondary SS? Or both primary SS and erosive rheumatoid arthritis?

There are arguments for both alternatives. The assumption that the natural history of this erosive arthritis and the treatment response is identical with that of classical rheumatoid arthritis cannot be granted. We were unable to find scientific literature dealing with this subject. On the other hand, it is known that patients with primary SS have an increased frequency of side effects to penicillamine and to gold sodium thiomalate compared to RA patients (11), and similar findings have been observed with levamisol (12).

Proposal

We would like to introduce the term "secondary erosive arthritis" which should be added to the initially diagnosed CTD – instead of changing the main diagnosis. In SLE, 5-10% of the patients may develop Jaccoud's arthropathy (13) and the same percentage of patients seems to develop erosive arthritis (14, 15).

In patients with primary SS, 50% suffer from arthritis with or without exudate predominantly localised to fingers and wrists. Morning stiffness is frequently reported and may last some hours and IgM-RF is commonly present in these patients (16). To our knowledge there are no studies investigating the development of erosive arthritis in patients with true primary SS. A patient with long-standing symmetric arthritis in the hands, morning stiffness for over 1 hour and positive IgM-RF with or without erosions would fulfil the ACR criteria for RA. Other criteria, such as HLA-type and special autoantibody profiles (e.g. anti-SS-A, anti-SS-B, and anti-RA33 antibodies) might be helpful in distinguishing between "primary/secondary RA" and "primary/secondary SS". In our approximately 400 patients with primary SS, we have observed to date "late" radiological erosions in 12 subjects. We will present a number of cases of primary SS fulfilling the criteria of RA, in order to discuss the correct terminology and implications for treatment in these patients.

The prevalence of secondary erosive arthritis (secondary RA?) could then be tested and evaluated in Cupertino with different centres in order to elucidate the clinical and serological characteristics of this subgroup of SS patients.

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