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Spondyloarthropathy, Spondyloarthritis, Axial Spondyloarthritis: A Rose by any other Name?

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What is a diagnosis, but recognition of a phenotype [1]? The term spondyloarthropathy is much debated, with alternative appellation suggestions. Spondyloarthritis and spondylarthritis have been suggested, but there has also been a movement to separate peripheral and axial disease, with the latter referred to as axial spondyloarthropathy. But, are such categorizations artificial constructs or even misleading? The suggestion that axially-affected individuals have a disease process different from those with peripheral disease is interesting, but what is the evidence for such segregation?

A unifying feature connects the disorders listed as a portion of the spondyloarthropathy category: Tendency to new bone formation, especially at sites of tendon and ligament insertion, joint erosion and fusion [2-7]. Originally divided into ankylosing spondylitis, reactive arthritis (no longer referred to by its former name, because its eponym was that of a war criminal), inflammatory bowel disease arthritis, psoriatic arthritis, and an undifferentiated form [6-12], these too may be somewhat artificial categories [8,13,14]. As axial involvement is universal only in ankylosing spondylitis, that region is not affected in many individuals in the other categories of spondyloarthropathy. While that would suggest that the axial spondyloarthropathy category might be more uniform in character (predominantly the ankylosing spondylitis variety), the other forms are 10 to 20 times more prevalent [6,7]. Thus, such categorization fails to distinguish among the varieties or actually establish a more uniform grouping.

Axial involvement includes calcification/ossification of the anulus fibrosus and zygoapophyseal, costovertebral and sacroiliac joint erosion and fusion. Sacroiliac joint erosion or fusion, however, is not a required diagnostic criterion [6,7,12,15-17]. Saleem and Hawass [18] suggested that diagnosis of ankylosing spondylitis be discarded when the anterior longitudinal ligament is ossified or of sacroiliac disease, absent. While that eliminates consideration of ankylosing spondylitis [19], sacroiliac joints are often spared in individuals with spondyloarthropathy and the latter, of course, is characterized by enthesial reactions - such as in the anterior longitudinal ligament.

One value of the axial spondyloarthropathy category might be obviating the diagnostic confusion with rheumatoid arthritis, which does not affect the axial skeleton (uppermost cervical vertebrae excepted). However, the peripheral joint damage of spondyloarthropathy is quite distinct in character from that of rheumatoid arthritis, minimizing diagnostic confusion when strict criteria are utilized [6,7,20]. Subchondral erosions, reactive new bone formation and peripheral joint fusion (in absence of exogenous corticosteroid exposure) do not occur in rheumatoid arthritis [20-38]. Confusion of axial spondyloarthropathy with diffuse idiopathic skeletal hyperostosis still remains a problem.

What is the evidence for validity of segregating axial spondyloarthropathy? Even MRI recognition of pathology appears to lack specificity [39]. Examination of the archeologic record fails to support that perspective. The distribution and character of disease involvement in populations with spondyloarthropathy are indistinguishable [20,40]. Examination of economically-challenged populations (e.g., Monroe City poorhouse, aka the Highland Park site) and economically-healthy populations (e.g., Belleville, Ontario) revealed identical disease prevalence, skeletal distribution, joint involvement, number and symmetry of joint erosions and fusion [40]. Examination of archeologic site populations with 20 or more affected individuals revealed identical patterns for more than 4000 years [20,23,25,26]. Specifically, the prevalence of axial involvement (the so-called axial spondyloarthropathy category) remained stable across those populations. The zoologic record provides similar disease characteristics and distribution [21,22,25,27-38]. This includes large cats, bears (lions and tigers and bears, oh my!), wild dogs, monkeys, apes, and even elephants.

Independent of the appellations spondyloarthropathy and spondyloarthritis, there appears to be little evidence supporting separate categorization of vertebral and sacroiliac involvement as axial spondyloarthritis. Examination of the character of spondyloarthritis-afflicted individuals in archeologic and zoologic populations clearly demonstrates that those with axial involvement are an integral component of spondyloarthropathy in general and do not represent a population separable from those with peripheral joint disease, similar to observations in the psoriatic arthritis subcategory [41].

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