Rheumatic Musculoskeletal Complaints in Diabetes—Adding Another Dimension to a Multidimensional Disease!

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Repetition, reiteration and reaffirmation are similar sounding words. That ‘India is the epicentre of diabetes mellitus’ is repetition ad nauseam. ‘Nephropathy, neuropathy and retinopathy are major complications of diabetes’ is reiteration ad infinitum. What is often overlooked and needs highlighting, followed by reaffirmation, is the fact that rheumatic musculoskeletal complaints are extremely common in diabetes. Despite being ‘commonly’ present, they are ‘uncommonly’ addressed and tend to get dwarfed by the micro and macrovascular complications of the disease. These ‘mundane’ manifestations, however, have the potential to exert a significant negative influence on quality of life in diabetics.

Any clinician who has handled an elderly diabetic with a frozen shoulder would vouch for this clinical reality.

The study by Agrawal and colleagues published in this issue of JAPI draws attention to the inescapable fact that rheumatic musculoskeletal manifestations are seen in a whopping 57% of diabetics. The prevalence was even higher in type 1 diabetes (62.7%). The authors studied 5736 diabetics and encountered various complications like chieroarthropathy (22.6%), frozen shoulder (20%), diffuse idiopathic skeletal hyperostosis-DISH (13%), flexor tenosynovitis (8.1%), Dupuytren’s contracture (7.2%), and neuroarthropathy (2.9%). Osteoarthritis was seen in a third of the patients. Poor glycemic control was seen to be associated with increased prevalence of rheumatological manifestations. The findings are in keeping with other studies from India and elsewhere. Whether these complications are intrinsic to diabetes or merely disorders exhibiting increased prevalence in diabetics is a matter of debate. The near ubiquitousness in diabetes is unquestionable.

Apart from commonality, rheumatic complaints in diabetes are associated with pain, disability and impaired quality of life. International guidelines like the Joslin Diabetes Center & Joslin Clinic Clinical Guidelines for adults with diabetes comprehensively cover cardiovascular health, lipids, blood pressure, kidneys, eyes, nerves, feet, mental health, women’s and men’s health and dental issues, but are silent about musculoskeletal health. Studies like those by Agrawal and colleagues should prompt us to move from ‘information’ to ‘action’. Physicians caring for patients with diabetes should be encouraged to routinely enquire about rheumatic complaints in their patient history. The acronym PASS can be adopted. This refers to 4 simple screening questions that can identify musculoskeletal problems—Pain, limitation of Activities, Stiffness, and Swelling in and around joints, muscles and back. A timely diagnosis facilitates appropriate treatment. Exercise and physiotherapy have the potential to ameliorate several musculoskeletal symptoms in diabetes, especially when instituted early.

One of the limitations of this field has been the knowledge gap about pathogenetic pathways, molecular mechanisms and genetic linkages. The information about rheumatic complications and/or associations of diabetes come mainly from observational and epidemiologic studies. Recent work focussing on PTPN22, a protein tyrosine phosphatase nonreceptor,
expressed by the majority of cells belonging to the innate and adaptive immune systems has shown that polymorphisms in PTPN22 are associated with several autoimmune diseases, such as systemic lupus erythematosus, rheumatoid arthritis and type 1 diabetes. The research implications of this finding are as yet unclear. The link between endocrine and rheumatic diseases needs to be explored further.

Diabetes is common. So also are rheumatic musculoskeletal complaints in these patients. However, these are neither routinely assessed nor optimally attended. Minor they may be, unimportant they are not. Physician awareness and attention are the key steps to address this dimension in the multidimensional disease that is diabetes!

References


