Evening Medical Update: Rheumatology

Modern and future treatments for rheumatoid arthritis – Professor John Isaacs

- Is there any concern around the response to standard vaccinations (e.g. flu, COVID) for patients put on these immunomodulatory agents? Would their response to vaccines be less or more than would be expected if on oral steroids, standard DMARDS etc.?

A: By definition, tolerogenic interventions are short-term treatments that have long-lasting but specific immunomodulatory effects. In particular, antigen-specific tolerogenic therapies only affect the very specific elements of the immune system to which they are targeted (eg modulating only the autoreactive responses in rheumatoid arthritis). They would not therefore be expected to affect the response to vaccines, past or present. Antigen non-specific therapies, such as anti-CD3 antibodies, are likely to have an immunosuppressive effect around the time of their administration, and vaccination should be avoided at the time of and for a few weeks after their administration. Again, however, in the longer term, the tolerogenic effect will long outlast the presence of circulating antibody and I again would not expect treatment to affect the response to vaccines.

- Is there evidence that stroma/fibroblasts lead to erosive disease as do the usual culprits of cytokines?

A: Yes, there is good evidence that fibroblasts erode. In fact it is now clear that there are several different types of fibroblast in the joint (and presumably also in other tissues). In the rheumatoid joint it seems that lining layer fibroblasts are pro-inflammatory whereas sub-lining fibroblasts are more destructive – see:

Distinct fibroblast subsets drive inflammation and damage in arthritis.

Croft AP, Campos J, Jansen K, Turner JD, Marshall J, Attar M, Savary L, Wehmeyer C, Naylor AJ, Kemble S, Begum J, Dürholz K, Perlman H, Barone F, McGettrick HM, Fearon DT, Wei K, Raychaudhuri S, Korsunsky I, Brenner MB, Coles M, Sansom SN, Filer A, Buckley CD.Nature. 2019 Jun;570(7760):246-251. doi: 10.1038/s41586-019-1263-7. Epub 2019 May 29.PMID: 31142839 **Free PMC article.**

How to approach the red hot joint – Dr Owen Cronin

- As a non-rheumatologist, we are not permitted to request anti-CCP. In the acute presentation of a painful joint, is this a significant problem?

A: for me, I don't know why this is the case that laboratories or trusts do this. Anti ccp and rheumatoid factor are more important in polyarthritis but occasionally RA will present as monoarthritis occasionally. I have seen patients who are rh factor negative and anti ccp positive so I think both should be done. Rh factor is more sensitive but anti ccp more specific for RA. I hope this helps.

- Where does sickle cell disease fit in your sieve? How might this affect susceptibility to other joint problems? I have a vague memory that septic arthritis due to salmonella is a thing.

A: I don't see patients with sickle cell having directly related joint issues. They are at a risk of osteomyelitis from salmonella which I think is what you are referring to. I have only ever read this, never seen a case. I hope this helps.