**BRITSpA Travelling Fellowship Report**

**Dr Jake Weddell visit to UCL, UCLH and Northwick Park, London**

**20-24th May 2024**

**Hosts:** Professor Pedro Machado and Dr Tim Bray

**Programme details/Fellowship aim:** 5 day programme to learn about advances in quantitative MRI and Artificial intelligence (AI), how they can improve the care of patients with spondyloarthritis, and to develop long lasting collaborations.

**Summary:**

Firstly, I would like to thank the BRITSpA team for awarding me this travelling fellowship and Professor Machado, Dr Bray and the wider teams at UCL, UCLH and Northwick Park for accommodating me.

During the week, I learnt about the new exciting MRI techniques which may be able to improve the identification of inflammation in the spine and sacroiliac joints, and only take an additional 5 minutes of scan time. I also met researchers aiming to improve the detection of inflammation in the small bowel and improve our understanding and management of inflammatory bowel disease, a common occurrence in Spondyloarthritis.

At UCL teams of researchers are developing AI based tools and techniques to improve the analysis of MRI scans, such a method to quantify inflammation in the sacroiliac joints. Whilst many of these tools are currently a pre-clinical phase, they will almost certainly be used in clinical practice in the future, and I was fortunate to see these being used first hand and meet the researchers developing these exciting new techniques.

Whilst on the fellowship I attended Wednesday SpA clinic ran by Professor Machado in Northwick Park, to see how they organise and run their service. I met some of the research fellows and registrars and we are currently collaborating on a project exploring the current use of MRI to assess treatment response in axSpA.

I also attended the national HLH MDT, a new clinical service developed by UCLH, which brings together experts in the research and management of this condition, and to discuss difficult cases and develop research. This model of having an open MDT available to anyone who wishes bring cases for advice could potentially be developed locally in our service, saving patients from waiting to be re-referred for a second opinion.

This fellowship has allowed me to develop new and exciting collaborations and develop my understanding of quantitative MRI and AI. I plan to use some of these techniques in my upcoming PhD fellowship application into the use of MRI to better understand treatment non-response in axial Spondyloarthritis.