Worshipful Company of Farriers
Equine Veterinary Studies Award 2024

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It was a massive honour to be selected for the Worshipful Company of Farriers (WCF) Equine Veterinary Studies Award 2024 for the University of Liverpool School of Veterinary Science. The week spent with the remedial and consultant master farrier Paul Horner was a unique learning opportunity, which will undoubtedly have a huge positive impact on my future career. Although farriery is of crucial importance in equine industry, at the university we are provided with limited teaching in this field.

Therefore, I am very grateful for Paul and his team who provided me with deeper understanding of the hoof anatomy, biomechanics, disease mechanisms and the intricacies of remedial farriery, and taught me some farriery skills which are required in day-to-day work of an equine vet.

During the placement week we travelled around the hilly Somerset area visiting different yards and working on a huge variety of horses, from miniature Shetland ponies to police horses, from pleasure horses to top UK 5* eventers. It was very interesting to observe how meticulously and efficiently Paul and his team were working. They taught me how important it is to treat every foot individually due to huge variation in the conformation of the equine distal limb. On top of this, you have to take into consideration the workload, the management and the signalment of the horse, the surface they train on, their competition schedule as well as the financial aspect for the owner.

Throughout the week Paul was explaining to me how to assess the hoof balance both statically and dynamically, and how to perform hoof mapping based on the external landmarks. By looking at the foot from the side we discussed the importance of the correct hoof-pastern axis (HPA), with the broken back deviation being a particularly common issue in the current horse population. In addition to this, Paul also emphasised that when assessing the medio-lateral balance, it is crucial to allow the horse's leg to freely hang down by holding it above the fetlock joint, rather than at the pastern, as the latter way makes it very easy to create a false sense of medio-lateral imbalance. A T-Square instrument can also help with evaluation of the medio-lateral balance in the forelimbs but not in the hindlimbs.

In the course of the week I really felt that I was gaining more and more confidence in: identifying lameness and analysing foot placement during the dynamic evaluation (trot-up); recognising the main issues that lead to distorted hoof balance during static assessment (both visual and radiographic); determining what can be achieved with hoof trimming and what type of corrective shoeing could be applied for the individual cases. I also learnt how to remove shoes in a correct and efficient manner from both front and hind feet using a buffer, nail pullers, and a hammer. Lastly, at the end of the week, Paul and his apprentice Billy taught me how to make a horseshoe from scratch – from a straight piece of steel. I could not have imagined how hard it is, and how much knowledge and skill is required!

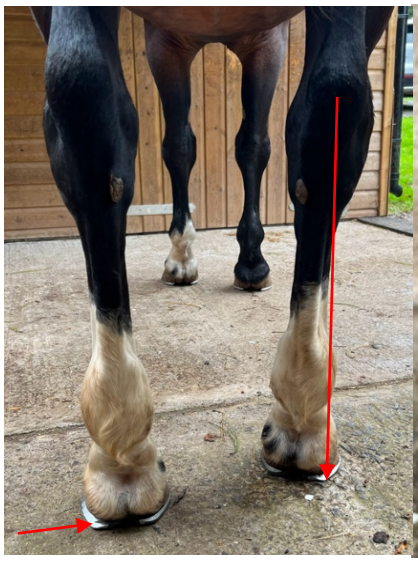


To further illustrate my learning process, I would like to discuss a few interesting cases that I have seen during the week:

Case 1

13-year-old eventing horse that has arthritis in multiple joints in the hindlegs

As you can see from the photos, heart-bar steel shoes were chosen for the hind feet. This type of shoe allows even loading of the frog, the hoof wall, and the heels, which helps to restore the natural pattern of weight bearing. The bars can help arthritic horses as they reduce the downward movement of the pedal bone and thus provide additional support for the coffin joint. In the images you can also see that additional lateral widening was made for this horse to further support the transferred forces from the laterally deviated tarsal joints (see the red arrows).




Case 2

A 10-year-old show-jumping horse. Both front feet: broken-back HPA (long toes and low heels), upright medial side of the hoof wall and flared lateral side of the hoof wall.

This was quite a complex case that had multiple foot balance and limb conformation issues. The broken-back HPA allows excessive strain to be exerted on the deep digital flexor tendon (DDFT), the coffin joint and other parts of the navicular apparatus. Therefore, to counteract these loading forces it is very important to shorten the lever arm from the centre of rotation (COR), which is the centre of the distal condyle of the middle phalanx and correlates with the widest part of the hoof, to the toe. This can be achieved by trimming, where the toe gets trimmed as short as possible, as well as by bringing the breakover point of the shoe further back. In the photos you can see that the breakover point was moved back by using the grinder which creates a so called 'rolled toe'.

With regards to the mediolateral imbalances, from the photos you can see that the medial side of the hoof wall is slightly longer and more upright, sustaining more weight and getting compressed with each loading, and the lateral side is flared to the side. To address these issues, the medial side was trimmed as short as possible, and the grinder was used on the lateral side of the shoe in order to smoothen the landing phase and to reduce the concussive forces transferred to the medial side. On top of this, although difficult to assess from the images, a slight widening on the medial aspect of the shoe was created to further alleviate the overload of the medial hoof wall. With Paul, we have also discussed that graduated pads with some packing (hoof cushion or silicone) could have provided additional support and correction of the HPA, however this was not implemented due to financial constraints (see an example from another horse with a pad and hoof cushion applied below).

Yellow arrow – breakover point moved back with a grinder; Blue line – breakover point; Green line – widest part of the foot; Green circle – COR; Purple line – lever arm from breakover point to COR; Red arrow – lateral side taken-off with a grinder

Overall, a week spent with this incredible farrier team was an invaluable experience. The acquired knowledge not only set the foundation for my career as an equine vet but also deepened my appreciation for the farrier profession. Therefore, I would really like to say a huge thank you to Paul Horner and his team, as well as the Worshipful Company of Farriers, with a special mention to Linda Quinn and Lydia Brown. And finally, I am very grateful to Harry Carslake and the University of Liverpool School of Veterinary Science to have been awarded this opportunity.

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