

## Worshipful company of farrier equine veterinary award 2023

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It was a huge honour to be granted the Worshipful Company of Farriers Equine Veterinary Award for Nottingham Veterinary School and my placement with Stephen Hill and his partner Sam was an incredible experience. This week was invaluable for advancing my understanding of the important role of farriery for correction of distal limb conditions, using their knowledge of mechanics of foot movement.

When I began on my placement I was nervous but Stephen was very welcoming and we began by discussing at length about the structure of the farriery education network. This ranged from the initial compulsory four-year apprenticeship and end-point assessment required to register with the farriers registration council, to the diploma, associateship, fellowship and then master farrier qualifications. This was a big eye opener for me as I had not realised the length and in-depth knowledge required by farriers to qualify and achieve their further qualifications.

From the first visit I was learning about how to recognise issues in medial-lateral foot balance through signs of compression of the horizontal bands of the hoof wall (fig. 1) and differences in wear of the medial or lateral aspects of the hoof wall or on the shoe. He also showed me how, by looking at their foot position or lifting the leg and letting it hinge at the carpus, you are able to visualise whether it has any medial or lateral verticle axis rotation by whether the hoof was turned inward (medial) or outward (lateral) to the midline (fig.2). We then went on to discuss how this influences the footfall of the horse, with those with medial deviation weight bearing more on the medial aspect of their joints and tendons, therefore predisposing the horse to injury due to the abnormal dispersion of these forces up the structures of the leg. Not only this but he showed me the difference it could make in the symmetry of the musculature in the horse, for example the side of a poorly balanced foot in the front often had an emphasised brachycephalic muscle due to the horse attempting to balance the forces in this rotated leg. Stephen then went on to describe how the role of the farrier in recognising these issues is paramount so they are able to apply corrective techniques and prevent these injuries and abnormalities from occurring. The cause of foot



*Figure 1 - can see compression of the horizontal lines on the medial aspect of the hoof wall due to more medial compression1*



*Figure 2 - an example of a case we saw with conformationally long toes and low heels that required graded shoes and dental putty. N.B. the lateral deviation of the toe seen on the right-hand photo which is causing the increase in medial compression.*

imbalance is most commonly conformation which cannot be changed after the closure of the growth plates, therefore all they can do is try and support the foot to allow the forces to be spread more evenly during weight bearing. For instance, in a horse with a medial rotation the shoe was made thinner on the lateral aspect of the foot and thicker on the medial aspect to support the hoof at this point. During the trimming they preserved the medial aspect of the hoof wall and evened off the longer lateral wall and showed me the improvement in the shape of the hoof using a T-bar. It was interesting looking at the process of this and their expertise in recognising and being able to correct foot balance with every foot having to be considered on an individual basis and when facing a whole yard of horses to get through.

As we went on, Stephen and I also started to discuss management of long-toe, low heel conformation in horses, which often results in a broken hoof-pastern axis. This was something that was always discussed at University, and I recognised as a conformational problem seen in many thoroughbreds and horses with overgrown horn. When talking this through I was able to better understand the importance of regular foot trimming to prevent this, and that due to the dorsal growth of the hoof it was only by regular trimming that you are able to bring the heel of the hoof backwards, thereby bringing the centre of the sole of the hoof back and reducing the extent of the long toe-low heel. While use of graded shoes to elevate the heel may temporarily fix the issue, those with long term issues usually had weaker heels meaning this shoe only applied more force to the weaker section of the hoof and would result in worsening of the condition. Therefore, Stephen explained that the best shoe type in these situations was the ibex frog support pad with dental putty which helped to relieve the weaker hoof and better distributes weight across the frog and sole of the foot. This supportive shoeing then needed to be accompanied by regular trimming and maintenance of the feet, and good management precautions to improve the quality of the hoof wall. Management changes included reducing their turn-out time when the conditions are wet and helping to keep the hoof wall dry or potentially through adding supplements to improve hoof strength.

One of the most important things I learnt during this week was that it is important to consider all the forces you are placing on the foot so you understand the consequences of different shoe types. One example Stephen and I discussed was the use of a graded shoe for treatment of a deep digital flexor tendons (DDFT). The main treatment of these injuries is through artificially raising the heel which relieves tension on the DDFT at this pressure point. This works by bringing the point of breakover back as it reduces the distance between the centre of the foot to distal point of the 2<sup>nd</sup> phalanx. However, this also shortens the tendon during healing which theoretically will increase the risk of a second injury. This technique also encourages the fetlock to drop which applies more pressure to the superficial digital flexor tendons and the suspensory ligament and theoretically increases the risk of injury to these tendons and ligaments. This emphasised the importance of considering everything prior to choosing a shoe to prevent inadvertently causing further injury.

Not only did we spend our time discussing these interesting points of farriery, but I was also given the opportunity to get involved. By the end of my time with Stephen, I had become proficient at removing both front and back shoes which was something I didn't expect from myself as I am not particularly strong and very inexperienced. I also was given the chance to make my own shoe, with a lot of guidance, which was great fun and gave me a big appreciation for the expertise needed to efficiently make shoes from scratch.

I could go on and talk about many more things I learnt during my week but overall I am just hugely grateful for all the teaching and support I was given when on my placement with Stephen and I look forward to using it in the future. Going forward in my career I hope this will help me to build good relationships with farriers and better help me endorse the necessity of good farriery and foot care for improving welfare of all horses in my care.

Thank you