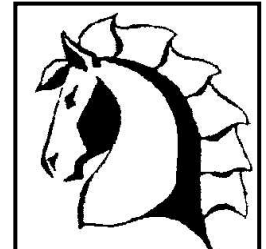


M.E.A. NEWSLETTER

THE MEDICAL EQUESTRIAN
ASSOCIATION

Registered Charity 328200
2008

WINTER / SPRING



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HER ROYAL HIGHNESS
THE PRINCESS ROYAL

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Dr. John Lloyd-Parry
Dr. Sally Nicholson
CO-OPTED MEMBER:

Dr. Ted Adam
Dr. Sara Astbury
Dr. Sara Farmer
Ms. Brenda Gilligan

The MEA received this Christmas card from Her Royal Highness The Princess Royal with the message

To you all,
With Best Wishes for a
Happy and Peaceful
Christmas and New Year
From
Anne

Hon. Sec. Dr. J. Trelawny,
Ravenscroft Hall,
King Street,
Byley,
Cheshire CW10 9LE

Tel: 01606 835480
info@medequestrian.co.uk

*****DATE OF NEXT MEETING:
Friday and Saturday 27th and
28th November 2009.
Venue: Royal College of
General Practitioners,
London*****

**Autumn Meeting of the
Medical Equestrian
Association 22nd November
2008**

**Held at the Liverpool Medical Institute,
organised by Dr. Ted Adams**

The first speaker was Dr. Ian Roberts, GP and Racecourse Senior Medical Officer at Haydock and Aintree since 1985 and a Director of Eventmed. He remembered the early days when one met at the pre-race dinner and had to beg, borrow or steal equipment, all of which was pretty basic. Since those early days, the Jockey Club appointed a series of doctors to improve the standards, starting with a radiologist, then a GP who apparently only lasted 3 weeks, then Michael Turner, who is still in post. As a result of his work, regular unannounced inspections take place and there have been some high profile failures resulting in fines to the respective racecourses. Many senior doctors have resigned as a result- bloodletting at the races! There have also been a number of technical improvements from the original wood running rails (first to concrete and aluminium, which caused more damage to horse and rider than the fall itself) to the current plastic rails. The doctors are now expected to observe 8 meetings to become acquainted with the job as well as attending an approved equine pre-hospital course such as Bob Bennett's Eventmed Course in Preston, BASICS or ATLS. Doctors are accepted onto a panel after filling in vacancies over the summer. Each

racecourse has its quirks, which adds to the fun of the job but now the care provided to the jockeys has been standardised. Dr. Roberts said how welcoming the organisers were to doctors, who no longer needed to be very heavy drinkers and sociable! He showed us a video of a race run at Aintree over the National fences the day before the big race. He reminded us that there were 27 fallers at last year's Grand National, all of whom were reached by the medical team within 15 minutes. At smaller meetings one may be required to look after the crowd as well, but not at Aintree where St John Ambulance Service provide 6 doctors for Grand National Day while there are 6-7 doctors covering the course.

There was a lively discussion. One member said that Point-to Point fixtures didn't have the same requirement for training and he had had no training for 3 years. Dr. Roberts pointed out that any doctor who provided cover at a Point-to-Point was given the regulation booklet from the BHA. Miss Hoult said that Point-to-point was now run by the Point-to-Point authority and that she is looking at ways of training duty doctors with Lucy Brack and that they are setting up a specific course, possibly in November 09. She pointed out that the senior racecourse doctor needs PHTLS or ATLS, even for Point-to-Point meetings. She attended the question and answer session run by Michael Turner in June. Dr. Roberts was asked what the most common injuries were and said that musculo-skeletal seemed to be much less common these days, in particular he saw very few dislocated shoulders now. He said that some of the worst injuries he had seen started as an innocuous fall but the jockey was then kicked by a horse, as was the case with Declan Murphy at Bangor-on-Dee. Dr. Turner was implementing the concussion protocol which includes psychometric testing of jockeys prior to

the start of each season and after concussion, the tests are repeated to confirm that they are back to their baseline before being allowed to return to the sport. The minimum number of doctors required for flat racing was 2, jumps 3 and Aintree 6, where they have a doctor and ambulance to cover each 3 fences.

The target is to see every faller within a minute. The jockeys have appointed a full time doctor (consultant) to look after their own interests as a result of a faller at Castle Bend at Chester Racecourse where the jockey in question wasn't seen by a consultant for more than 24 hours. The new system links in with the NHS but prioritises care. He pointed out that flat race jockeys had far higher expectations than jump jockeys as they fell far less frequently, but the injuries were usually more serious. Miss Hoult asked whether the new design of fences had reduced the number of fallers. He said that it was a pity to standardise the courses and that the last death at Haydock had been a grounds man who was hit by a horse head-on. He was asked about the injuries sustained by the 27 fallers last year and reported that 3 or 4 were serious including one jockey who fractured his neck for the second time when he fell at the second fence. He made a good recovery but has since retired. Apparently an off duty Consultant in the crowd wrote a letter complaining that the management of this jockey at the scene had been too slow. Dr. Allenby said that 27 falls was 27 too many and asked whether any changes were planned to reduce the number? He was told that the fences had been modified but were still formidable. It could be an issue of horsemanship. The ground was always soft for the landing but of course, this made it more tiring for the horses, which could be contributing to the falls. Some horses clearly should not be finishing but for some jockeys this is their one shot at the National and they want to finish at all costs! Dr. Johnson asked whether they used a standardised triage system with so

many fallers. Dr. Roberts said that many triaged themselves by rolling out of the ways as quickly as they could! The National is a course with no bypass route round fences, causing some of the carnage and mayhem!

The second lecture, EMERGENCY SERVICES PROTOCOL- a co-ordinated approach to managing equine incidents, was given by Mr. Tim Adams, Equine Surgeon and brother of Dr. Ted Adams, who explained that he was an ex-eventer (too old and scared!) who had a practice in Dorset.

The Horse Rescue Fund and the Emergency Services Protocol were launched in May 2007 and were for 999 and Fire and Rescue Crews. They provide advice for managing incidents where equines and other large animals are involved. Three quarters of vets don't work with large animals so the ESP directs the vets with expertise for control room staff. The directory also includes contact details for horse transport, ambulances and knackers' yards. It receives donations from equine industries and the fund reimburses vets to attend incidents when there is no owner or insurance to cover the costs. It provides DVDs and practical sessions for final year students. Information is provided for extraction from ditches, road traffic collisions, bogs, cattle grids and stable fires. Historically, the Fire Brigade is usually called first, with variable results. The Protocol was triggered by two badly handled incidents, one of which Mr Adams was directly involved with (his father's elderly horse). The horse bolted in the fog and became trapped in a cattle grid. Mr. Adams sedated him, gave him analgesia then called the Fire Brigade but was told that the RSPCA Officer and Risk Assessment Officer had to come first. As a result of procedural delays in the control room, it took three and a half hours for the Fire Brigade to arrive on scene. By the time he was extricated he was in too poor a

state to save and was put down. The other incident involved a badly injured horse under a horsebox. After an excessive delay, a police marksman shot it. No vet was involved. The Protocol was the brainchild of Brian Curry (British Horse Society) and Josh Slater (British Equestrian Federation) helped by Horse and Hound, which ran a campaign.

Mr Adams demonstrated graphically how bystanders and particularly owners often put themselves at risk trying to help their horse. He showed a clip of two horses trapped on a wooden bridge over a river which had given way, leaving them with four legs sticking through holes in the bridge and no way of getting up. It demonstrated a number of points, including the importance of keeping any rescued horse close to the trapped one to prevent it panicking (the first horse was hoisted, struggled and fell through the remaining planks, landing safely in the river, only for the remaining horse to panic and struggle so violently that the rest of the planks on the bridge gave way and it too fell into the river.

Next we were shown a clip of Lucky, the training horse owned by the Hampshire Fire and Rescue service. Lucky is plastic but a realistic size and weight. Danger zones can be demonstrated, in particular the head and the legs. The head collar should be held by the vet or Fire and Rescue if a horse is on its side. Rescuers approaching a horse should steer clear of the head and approach it from the back to avoid getting kicked or head-butted. An animal rescue conference was held in June 08 to help train vets signed up to the Protocol in basic rescue techniques. We were shown the long crooks used to attach straps to a horse stuck in a bog rather than leaning over with one's arms. The role of the Fire Officer is to take charge, manage the incident and keep the area safe. Human life takes priority over animal welfare. The vet's role is to provide first aid if it is safe

to do so and to sedate or anaesthetise if appropriate and sadly, sometimes to euthanase. We saw the Downer Cow Harness, used to lift cows and horses out of bogs. The blue hobbles are used to stop the animal from kicking and the yellow straps to drag the animal up a slope. Sedation is usually given as it makes the extraction safer and the fire crew safer- but animals can still kick! It is usually given IV or IM and alpha2 adrenergic antagonists and opioids are the favourites although GA with ketamine, diazepam and thiopentone may be required.

Eventing and accidents: The duty vet at events can hopefully restrain the horse and where no vet is present, the Fire Brigade can find a local one in the Protocol. During the discussion Dr. Allenby asked whether it was the correct thing to do to sit on the horse's head to keep it down and stop it from struggling whilst waiting for help? Mr. Adams said that in theory it could prevent head-butting and that the horse would be less likely to panic.

Our third speaker was Dr. Debra Archer, Senior Lecturer in Equine soft tissue surgery at Leahurst, the veterinary school of the Liverpool University on the Wirral. She too rides with a particular interest in Eventing and is the duty vet for Hartpury and Bramham three day events. Her subject was colic. She explained to the non-horsey delegates that colic was the symptom of abdominal pain in a horse. The horse has three major design faults: it walks on its middle finger, the upper airway design includes guttural pouches and the gastro-intestinal tract is very mobile and easy to twist and obstruct. She said that compared with other animals such as sheep, horses were extremely sensitive to abdominal pain so presented early. It is a true equine emergency and they can thrash around in the most alarming way in their agony, bashing their heads against the stable wall or floor. Differential diagnosis includes ovarian cyst or rarely, splenic or

hepatic causes. The cost to the USA economy in 2001 was \$115.3 million, of which 60% was related to mortality. In the UK the incidence is 3.5-10.6 colic episodes per 100 horses per year. The incidence in wild horse is unknown but presumed to be far less, possibly because of the unnatural way in which we manage our horses, which would spend 17 hours a day grazing in the wild. There is a 6.7-15.6% fatality rate per episode of colic. Colic is medical in 9% and surgical in 30%. The horse cannot vomit so unless the stomach can be decompressed manually, it will rupture. It is not unknown to drain 18 litres of fluid from a nasogastric tube. The usual cause of colic is displacement or torsion of the highly mobile large intestine, which can strangulate. She has anaesthetised horses weighing as little as 17kg or as much as 1000Kg. In about 70% of colic cases it is spasmodic or gas colic but in 7-9% it is obstruction and a true surgical emergency. Colic surgery has been accepted since the 1970's with the UK, Germany and the US leading the way. Leahurst was fortunate to have Prof Barry Edwards as head surgeon and although he has since retired, he still comes in and does a list a week. Dr. Archer trained with him (and he operated on the Hon Secretary's horse).

Indications for surgery:

Non-response to analgesia
Heart rate above 60
Naso-gastric reflux greater than 2 litres
Positive rectal findings
Increased peritoneal total protein
Increasing abdominal distension
Decreased or absent bowel sounds

About 400 colic operations are performed at Leahurst each year and about 300 medical colics are referred. The cost of treatment varies from £2500 to £7000 and increasing numbers of pleasure horses are either insured or have owners who are prepared to pay. In places like Romania or the Ukraine, 95% of horse are still used for

work and are dispensable so colic surgery is seldom performed.

Colic surgery tends to be performed at university run-or-private clinics and invariably takes place out-of-hours. The team includes a surgeon, an assistant, an anaesthetist and medical students to help. There are seasonal peaks in spring and autumn, possibly due to changes in stable management at these times of the year. We were shown a video of a horse being anaesthetised. It was forced against a wall so that when its legs gave way it could be assisted to slide down the wall. We were shown slides of endotoxic rings on a horse's gums and a rectal examination being performed. She sometimes needs to stand on a bucket to reach. Sometimes ascetic tap is performed and haemorrhagic peritoneal fluid is an indication for surgery. The decision to operate is taken within 10 minutes of the horse arriving at Leahurst. Rarely ultrasound or laparoscopy is needed to decide.

She noted that vets are catching up with medical resuscitation and Liverpool is a leading centre on investigation into post-operative survival. Increased heart rate, increased or decreased packed cell volume and duration of colic prior to surgery all worsen mortality. In general, age greater than 18 years worsens survival but ponies are the exception as they can do well even into their 20-30s. Anaesthetising horses with colic is fraught as they can be violent with pain, are often septicaemic, hypotensive and are unable to lie on their backs for any length of time. They develop respiratory depression very easily and can fracture their legs when they scramble to their feet after coming round. Anaesthetic mortality at Leahurst for non-colic is 0.9% and for colic is 8%. Overall, colic mortality is 5.4%. We all had hysterics when she showed us the equine endotracheal tube- three feet long and the size of a man's wrist!

The anaesthetist now has pre-intra- and post-operative involvement and this, combined with newer induction agents and monitoring has improved survival. There is now specific three year residency training in colic surgery. Critical care lags behind human critical care because of the cost. The important decision is whether the bowel is strangulated or not and whether it is the small or large bowel. The oesophagus and stomach rarely cause pain. The most common causes of small bowel colic are in order:

- 1) A pedunculated lipoma of the mesentery, which wraps around a loop of small bowel (common with age and in geldings).
- 2) Epiploic foramen entrapment (herniation through the equine equivalent of the foramen of Winslow). This can involve 40 feet of strangulated bowel and crib biters are 70 times more likely to suffer from it than other horses. The incidence peaks over Christmas, possibly because horses are stabled for longer.
- 3) Caecal tapeworm load causing ileal impaction and colic.
- 4) Focal eosinophilic enteritis lesions; first seen in 1997, the incidence is increasing in UK and Ireland.
- 5) Inguinal hernia leading to strangulation.

Grass sickness is a terrible disease of horses which can initially mimic colic as they develop an ileus and salivation. It is an equine dysautonomia for which there is no treatment and when one of Sheikh Maktoum's horses contracted it whilst insured for 30 million pounds, the 9 insurance agents camped at the stables to authorise every treatment and investigation!

Large bowel colic:

Caecal intussusception

Impaction of small colon

Rectal tears from rectal examinations leading to peritonitis

Older horses tend to do less well with colonic lesions. A large part of the colon has no attachment to anchor it and can rotate 180 degrees, causing strangulation.

In a large area from Blackpool to Birmingham, sand impaction can cause a pendulum effect by acting as a weight. The horses eat the sand whilst grazing.

Torsion is common after foaling, probably because of changes in management at this time.

Adhesions

Focal eosinophilic colitis

Initial recovery: horses have a belly band to help prevent hernia formation and iv fluids. We were shown the long, curly giving sets rather like a telephone wire, to allow horses mobility. The stable doors are open to allow a view and they are taken for a walk and a nibble of grass as early as possible to get the gut moving again. The students have the job of leading them out, usually in the pouring rain!

Complications: Post-operative colic is a dreaded complication whilst the head over the door sign is welcomed! They can thrombose the jugular vein and laminitis can occur, especially in the US. They are usually discharged on day 7. There is an increased risk of colic in the first 30 days but after 120 days one can usually relax! The risk of colic is increased by small bowel surgery and side-to-side anastomoses. Relapse occurs in 15-27% of small bowel surgery with a survival of 50-50. The big problem is adhesions, which occur in 6-22% and typically present 5-7 days post-operatively. They are usually in sicker horses and possibly worse in foals (she thought that the same was true in humans?).

Once the horse has returned home, it has 8 weeks of box rest to protect the scar.

Wound infection is rare but hernias occur

in 8-16%, the majority cosmetic. Infection increases the risk of hernia by 18 fold and treatment is by mesh repair. Horse may return to full work within 6 months and famous horses include Desert Orchid, who lost 30 feet of small bowel but went on to compete again and a horse who completed show jumping at Hickstead 5 months after colic surgery. Horses are usually off for 4 months then spend two months getting back into work. One of their pony colic patients survived surgery aged 29 years then went on to compete in the Prince Phillip Games.

The floor was then opened for discussion. She explained that the risk factors for colic were change in feeding, change in routine, change in turnout and time on box rest. For this reason she advised gradual change in any management and plenty of turn out all year round. Leahurst has a website for its owners: www.wirral.liv.ac.uk/equinecolic. She was asked about the role of paracentesis. She usually used a 1 1/2 inch needle but rarely required a spinal needle. Paracentesis was contraindicated if there was obviously very distended viscus. She explained that PR examination was much more helpful than in humans as one could feel colon, caecum, pelvic organs and the small intestine. A distended small intestine felt similar to an inner tube!

After an enjoyable lunch, we reconvened to discuss the One Fall Rule introduced by the FEI on 6.6.08. Miss Hoult explained to those who had not heard the ruling that the FEI rule applied to International Eventing and brought Eventing into line with Show Jumping. Any fall incurs elimination of the rider on that horse. British Eventing previously eliminated riders after 2 falls or a horse fall. After initially announcing that it would follow the FEI rule, British Eventing then decided to continue to allow riders to continue as before, unless they were competing at an international event, in which case the FEI ruling applied. The

MEA Council were concerned that BE had taken a different stance from the FEI. They also wondered whether a duty doctor could adequately assess a rider for concussion after a fall in the time allowed and also whether the FEI ruling prevented riders from competing on other horses at the same event. There was discussion about whether the MEA could reach a consensus view to put forward to the BE safety committee? A postal ballot of members of the MEA was also suggested, as was a ballot to all doctors who provide medical cover at BE events. Dr. Allenby asked what evidence the FEI had to say that one fall increased the risk of subsequent rider death? He was told that the FEI website showed statistics gathered on types of falls, rates of injury and fatalities which have been collected since the Hartigan Report into a spate of Eventing deaths in 2000. A safety meeting had been held earlier in the year to which no doctors were invited. Dr. Lloyd-Parry thought that the stimulus for the meeting this year had been the increase in US Eventing deaths and the question mark over Eventing's Olympic status after 2012. He thought that Princess Haya was under pressure to 'pull' the sport. The Chairman of the Medical Committee was American. Data was available on the type of fall and the class of rider (whether amateur, professional or multiple rider). Members felt that the blanket rule was not helpful for the sport as most falls were innocuous. Many thought that a rider should be banned for the day after a dangerous fall but allowed to continue after a trivial one but that safeguards were required including taking part on a second horse being conditional on an assessment at the end of the round. A checklist assessment was mooted including minimum history and examination requirements. Dr. Meeson said that at the Pony Club events there were numerous falls where riders were obviously OK but that for the worse falls, the doctor must assess and observe over time. It was equally important to educate

the riders, possibly through the Eventing Riders and Owners Association. Dr. Nugent thought that in the majority of witnessed falls, it is obvious whether the fall is significant or not but with one doctor on the cross country course, the majority of falls will not be witnessed. He thought that with a 60 point penalty for the dismount, it was reasonable to end that round. Witness accounts were often inaccurate as they were usually the fence judges who were also trying to remember which flags to wave, how to stop the clock etc, Riders were pumped up with adrenaline and frequently irrational. Dr. Farmer recounted the story of a rider who told the doctor that she had fallen onto her feet and remounted when she had actually landed on her head and been unconscious for a few minutes. She was clearly concussed 20 minutes later but not at the time! Even experienced doctors struggle to make an accurate initial assessment and are under huge pressure to clear the course. We need a quiet place to examine fallers. Mention was made of the new BE red flag system where officials could stop riders when fence judges or Control thought that they were unsafe. Dr. Johnson said that one must assume that riders were unsafe unless one had witnessed the fall. He saw a rider who fell and was told to walk home carry on and complete the course and agreed that one should insist on an assessment at least 20 minutes after the fall before passing someone fit to continue on another horse. We all agreed that unlike racing, it was impossible for doctors to assess every faller on the course at the time of the fall. Dr. Allenby said that Pony Club rules stipulated that fallers must be assessed before they were allowed to remount. He said that the Prague concussion rules do help rule out concussed fallers. Apparently it was possible to be concussed after landing on one's feet! The other important issue was whether the rider could still control their horse after the fall- both for the welfare of the horse and the safety of spectators!

They might also be unfit to drive home.

Members then voted for:

- (A) FEI rule as it currently stands (eliminated after one fall SJ or XC)
- (B) MEA modified rule: rider may compete on another horse after assessment
- (C) Current BE rule (one fall allowed, can continue, assessment if second ride)

There were no votes for A, 16 for B and 6 for C.

Our next speaker was Dr. Claire Hammell, SpR in Anaesthetics who spoke about the North Air Ambulance and the role of helicopter evacuation of seriously injured casualties. Air Ambulance service has been in operation for 20 years, provided by 14 organisations, all of which are independent with different funding. The majority of the UK is covered and within the past year there have been attempts to unify the training and standards in UK HEMS using evidence based practice. The majority of air ambulances are tasked by Ambulance Control. London HEMS employ their own paramedics to sit in Ambulance Control and filter out inappropriate referrals. An air ambulance can usually only transfer a single patient, usually with a paramedic alone or with a doctor as well (anaesthetist or Emergency Medicine trained). The air ambulance carries the same equipment as the road ambulance including advanced airway equipment. The most noticeable difference is that all the equipment in the back has to be fixed so is attached to the ceiling and walls. Space is even tighter than in a conventional ambulance with limited access to the patient during transfer.

Types of callout include trauma (including blunt, penetrating and entrapment), medical requirement (particularly where the location is awkward for road transfer) and where transfer time by road is too long. The advantages of the air ambulance service include earlier assessment (at the scene) by an experienced doctor,

availability of additional skills, in particular advanced airway skills, opportunity to give alternative analgesia and the choice of the appropriate hospital for the type of injury as the doctor can override the usual local catchment area restrictions.

The evidence for improved survival with this type of transport is scarce and comes mostly from the US and Australia. It is most useful for serious head injuries where earlier intubation, sedation and CT improved prognosis and this is probably faster in the air ambulance where it is done en route. The air ambulance is only faster than the road ambulance when the distance from the scene to the hospital is more than 45 miles, partly because the air ambulance takes an average of 23 minutes to reach the scene compared to 5 minutes for the road ambulance. Scene time is longer when doctors are present but there are more emergency interventions such as needle decompressions of tension pneumothorax and more rapid sequence induction anaesthesia, reducing the mortality in blunt trauma patients despite the severity of the injuries.

The air ambulance is requested via Ambulance Control. They need a succinct and accurate history of the casualties and the reason for the air ambulance. The location is crucial, particularly in rural areas. The crew need to know the optimal place to pick up the casualty. It is important to use the time waiting to optimise the casualty's treatment and 'package' them including splinting long bone fractures and suspected pelvic fractures, giving adequate analgesia and anti-emetics and placing them on a scoop stretcher after cutting clothes off (skin-to-skin).

Special circumstances:

Chest trauma with flail will have problems lying flat so needs intubation and ventilation prior to transport. They

frequently deteriorate en route and it is difficult to do anything in the cramped confines of the air ambulance once in transit. One has a very low threshold for treatment of pneumothorax including prophylactic needle thoracostomy on the wounded side. Chest drains are rarely inserted in the field for reasons of sterility. Head injury with a GCS of <12 requires intubation and ventilation for transfer. A lower threshold may be used if a casualty is showing a falling GCS or has impaired ventilation. When patients have a mild to moderate injury and are agitated it is unsafe to confine them in the air and one should try to use the ground ambulance and it is excessive to intubate and ventilate them with the associated risks.

The usual recommended landing site for the air ambulance is a field at least 35meters wide to accommodate the rotor blades and with an incline of no more than 5 degrees, clear of people and debris because the down rush generated by the blades blows everything everywhere. The rotors are also very dangerous and on a windy day, can almost touch the ground. Many people have been injured by the rotor on the tail. Anyone using the air ambulance is taught to approach from 45 degrees in front of the pilot.

On arrival at the scene, the team reassess the casualty, perform any investigations, package the casualty for transfer as quickly as possible and transfer to the most appropriate hospital. En route it is cramped, noisy and communication is via 'helmet comms'. It is difficult to hear one another and instrument alarms are usually inaudible. The vibrations of the helicopter interfere with blood pressure measurements. Further transport may be required by road from the helicopter landing site to the hospital. The helicopters are expensive to run with each flight costing in the region of £600. They all have GPS so if one knows the Ordnance Survey grid reference of the location it is

extremely helpful as one field looks very like another from the air!

Next Ross Riley and Jeff Kang showed us the Hit-Air Jacket System for motorbikes and horses. The jacket or vest contains an airbag system and a gas cylinder and is attached to the motorbike or the saddle by a clip. If a force of more than 30 Kg is applied (by the rider falling off) then the cylinder activates, inflating the airbags in a fraction of a second and providing a cushion for the c-spine, lumbar spine and thorax. It deflates 15 seconds later and is marketed as an additional safety feature to add to a body protector, to give the C-spine and lumbar protection only when needed. We watched a very impressive DVD of a bike rider hitting a car at speed and the protection afforded against hyperflexion or extension and the shock absorption then we saw the jacket inflate and deflate and also tried wearing the inflated jacket. The likely cost of the jacket will be about £300 with the refill cylinders £8-12 each. It can be worn under a jacket or over a T-shirt. Our main concern was what the effect of the cylinder activation would be on horses in the vicinity- eg on a fun ride or in the collecting ring as it made a very loud bang like a shot. It is certainly a novel and potentially valuable addition to current safety equipment.

The next speaker, Dan Perry, SpR in Orthopaedics spoke about Spinal Injuries in Equine Sports. He began with mechanism of injuries showing that the incidence of injuries was about 1 for every 350 hours spent in the saddle, 20 times worse than motorcycle racing. There were 5 times more head injuries than spinal injuries with thoraco-lumbar more than cervical. Two thirds occurred as a result of a fall and a third from a kick. 13 were crush injuries. He warned us to do no harm when managing injuries as 25% of spinal injuries were mismanaged or worsened during initial management in the series he presented! These were partly

caused by handling and partly by mistreating hypoxia or hypovolaemia. The typical spinal injury in a cross-country rider in the jockey position is a c-spine flexion-compression injury and a stock probably doesn't prevent injury. One should consider C-spine injury when there is neck pain and a high risk fall- ie from 3 foot or any horse fall or a high risk fall with a painful distracting injury! They all need an Xray. The first person at the scene takes control of the c-spine. The helmet should probably be removed in the field and a rigid collar added. In-line manual stabilisation must be maintained until the patient is secured to a spinal board and blocks. Thoraco-lumbar spinal injuries are much more common than c-spine injuries in riders. The whole spine must be immobilised. There is anecdotal evidence that the more rigid body protectors may increase thoraco-lumbar junction injury by acting as a fulcrum. The relative merits of a vacuum splint or a rigid backboard were discussed. The vacuum splint is much more comfortable for the casualty and far less likely to cause pressure sores. If transit time is likely to be prolonged, the vacuum splint is preferable.

Remember to treat hypoxia and shock. Aim for a palpable radial pulse (equivalent to a systolic BP of 90mmHg). Consider neurogenic and obstructive (cardiac tamponade, tension pneumothorax) shock as well as hypovolaemia.

Fractures in paediatrics are treated by the same principles of reduction, fixation and rehabilitation but special features include gaps and growth plates (weak spots which may fracture) in the long bones. Joints are lax and distort easily so dislocations are more common than in adults. Bones bend so the greenstick fracture occurs. Pre-hospital management still consists of ABC. Blood loss is best treated by splinting, particularly the femur or arm. Splints are also good analgesics. Pharmacological agents are also important.

Neurovascular structures may be at risk and it is important to recognise an open fracture. Supracondylar fracture of the humerus leads to associated neurovascular injury from marked displacement of the brachial artery and median nerve. C-spine protection needs to take into account the disproportionally large head (pad under the shoulders to compensate) and children can become combative if immobilised so may be safer left alone. They may also have silent neurological injury without a fracture because of hypermobility of joints, ligaments and bones.

The final speaker was Dr. Sarah Wood, SpR in Paediatric Surgery: Her first message to all of us was not to be scared of them and her second to use the same basic approach of ABCDE taking into account differences in size and systems. She reminded us of the simple formula to work out a child's weight: age x2 plus 4 and for those of us who seldom deal with children, the Breslow scale, a tape used to measure the length of a child with all the calculations worked out for you. The infant has a large, floppy epiglottis so care must be taken with intubation. The type of laryngoscope used isn't important. The tidal volume is smaller and the respiratory rate faster in children. Circulating blood volume in pre-adolescents is 70-880ml/kg. They can bleed out very quickly with an open fracture because of their small circulating volume.

Parents should not be sent away but instead, asked to help. They rarely panic if they are involved and help reassure the child. Children are generally accident-prone and have big heads when tiny. Their rib cages are elastic so they can incur significant pulmonary contusion without a rib fracture. Likewise a significant abdominal injury can exist without a bruise to the skin. Interosseous needles are very useful for resuscitating children. Analgesia should be given early and are

weight-dependent (a handout was provided). Younger children are obligate diaphragmatic breathers until the ribs become less horizontal and elastic. The liver is larger proportionally and less protected by the ribs and can easily be damaged by abdominal trauma. The bladder lies outside the pelvis in babies. Children have little padding so injure more easily but they do complain of pain. PR is not done in the field and one must be gentle. There is a high risk of neck injury. We saw a few slides of Sarah's sport, Horseball. She likened it to rugby on horseback. Head injuries are apparently common! We then split into groups to practice paediatric basic life support.

Annual General Meeting of the Medical Equestrian Association 2008 held at the Liverpool Medical Institute at 5pm, 22nd November 2008

Present: Miss Hoult, Dr. Mackay; Dr. Adams; Mr. Perry; Dr. Lloyd-Parry; Dr. Allenby; Dr. Trelawny; Mrs. Dale; Dr. Meeson; Dr. and Mr. Johnson; Dr. Nicholson
Apologies: Mr. Chadwick; Dr. E. Love; Dr. and Mrs Carter;

The minutes of the previous AGM held at Dunraven Arms, Adare were proposed and seconded by Dr. Meeson and Dr. Mackay respectively as a correct record of the meeting and signed by Miss S. Hoult who had stepped in to chair the session at the last minute.

Matters arising: The Certificate of merit awarded to Mr. Iain Grant was shown to the members but sadly, Mr. Grant had been unable to attend to receive it. Mr. Chadwick sent his apologies for his unexpected absence as his daughter had appendicitis. Miss Hoult spoke of the highlights of the year, beginning with a surprise email in the New Year to Ian Mackay from Wilson Lee in Hong Kong. An initial request for a speaker from the MEA rapidly snowballed into a request for

5 days of in-the-field training for 170 doctors, nurses and therapists in preparation for the Hong Kong Equestrian Olympics. Miss Hoult, Mr Perry, Dr. Hammell, Dr Astbury and Mr Chadwick represented the MEA. Sadly Dr Adams was unable to travel with the team because his father was in hospital but his huge contribution to the event was greatly appreciated. The team produced the TPAC course where equine-related trauma skills were taught with the help of local instructors both at the local hospital on a rugby field and at Sha Tin Racecourse. Some feisty racehorses were provided for the sessions and one delegate nearly got kicked! An excellent time was had by all and special thanks were given to Mr Chadwick in his absence for the phenomenal amount of work that he put into ensuring the success and recognition of the venture. Doctors at Events continues to develop a variety of equine-related courses including a new paediatrics course, a point-to-point doctor course and BE doctors courses. She congratulated Mr Grant on his award and reminded us of the 25th anniversary of the MEA in 2010.

Election of Officers:

No-one volunteered to stand for office. Dr. Nicholson, Dr. Adams and Dr. Trelawny agreed to remain in post and were proposed and seconded by Miss Hoult, Dr Trelawny, Miss Hoult, Dr Mackay, Dr. Adams and Mr Perry respectively.

Any other business:

Dr Allenby said that the Olympic venture in Hong Kong had been a stunning success and just the profile that Dr. Lloyd-Parry had envisaged 23 years ago when the MEA was born. Mr Chadwick had asked Miss Hoult to discuss setting up a foundation to fund research and medical safety. This lead to a discussion about

BHS safety data, accident reporting forms and trying to get the BHS to send the forms to the MEA as well (Dr Adams). Future meetings: The 2009 meeting was to be held at Greenwich in the autumn with possible attractions being the Royal Naval College and Knightsbridge Barracks. A theme had not been identified to date. The 2010 meeting was likely to take place in the autumn in Gloucestershire near Badminton. Miss Hoult was planning visits to a racing yard and planned a veterinary theme with paired speakers from medical and veterinary disciplines to compare and contrast current practice. Members wondered whether we could manage a spring meeting as well for 2010, proposing Newmarket. This was thought unlikely with the attendance numbers for the current meeting unless there was a huge increase in membership over the forthcoming year.

Dr Allenby noted that there had been a huge proliferation in private ambulance cover at Pony Club Events and wondered whether the MEA should have a role in standardising the level of care from Private companies in association with the BIS organisation? There was an incident at a polo tournament where a player fell off at speed, was seen by the paramedics and passed to continue playing. Later on he was seen in hospital where he had a fractured mandible and wrist. Two years ago a woman died after a significant fall. The Pony Club organisers, when asked whether they are happy with ambulance providers, say that they don't know what they should be looking for. Should there be an approved list of providers? At this point the security announced that the building would be locked in a few minutes and the meeting was closed promptly at 15.45!

Learning to Fall by Stephen Chadwick MS FRCS Chairman, MEA

Horse and Hound is to be congratulated on Chris Bartle's article on learning to fall (H&H. 22 May) and bringing the issues of equestrian sport safety back into the public domain. The thrust of the article is that training to take a fall may in the long term reduce the injury rate. This so far is conjecture, but it is not the main implication of the article. Included is a sad list of event riders who have recently been killed. And after this year's conference in Copenhagen (the International Equestrian Federation Eventing Safety Forum. 19 January), that Mr Bartle attended, the crude data of injuries occurring at events were published. If a recreational drug that killed or maimed the same proportion of young people became available there would be an outcry. Greatest risk to a rider is in a somersault fall, where the

forequarters of the horse are brought to a sudden stop by an obstacle and the hindquarters somersault over the head of the horse. Despite being fit and well trained, I wonder how many athletes would be able to protect themselves by a tuck and roll technique in such circumstances.

A simple solution is unlikely. However, I fully support the desire for further analysis of the FEI data and the need for laboratory based research. Then a rational plan for development concerning the safety, be it with external protection, gymnastic manoeuvres or a combination of both, of our sportsmen can be developed without unnecessarily compromising the grace and excitement of this sport. This will require financial support, but given the alarming incidence of accidents it must be the international governing bodies' obligation.

A light hearted article by Theo Nugent

In a cross country....

Moments of revelation are unpredictable things. You're minding your own business, not really thinking of anything in particular, and an arc light of clarity engulfs you. It feels like clarity so you probe a bit for the flaws, doubting the feeling, and yet the proverbial penny has dropped.

Here's what happened: I like horses, it is not illegal, and the vast majority of horsey people are as mad as a box of frogs in a good way but I like that too. They often sound well off, but are frequently skint. Their dogs are small mad wiry things. As indeed are the riders. The Three Day Event lot are gloriously eccentric, determined and brave. Anyone who can make a horse do Riverdance one day and flail over hills and dales on it the next has my respect. They occasionally win enough money to pay for nearly an entire month's feed.

I enjoy helping out at Cross Country events, and that was my pathway to enlightenment. At a recent event at Necarne in Fermanagh there were competitors from these islands and yerp (the polite word for continental Europe). Vets, farriers, fence judges, commentators, time keepers, food suppliers, paramedics, communications experts, stray dog spotters, portaloo providers and what I thought in my foolishness to be organisers.

I had marvelled at nearly three hundred horses and riders setting off on a two mile course at two minute intervals and that everything went like clockwork. Even when things went wrong they went right smoothly.

What gigantic brain was co-ordinating this huge event held on Fermanagh's only sunny day? I had to find out. These people only met once a year for this event.

The answer: The organisers were organisers up to a point. Up to the point when everyone

turned up. Then they were consummate delegators.

"Trust everyone to do their job and let them get on with it".

The point where detailed, gruelling planning ended and someone with fingers crossed said, right, now everyone will turn up and do their bit. Every helper and competitor was entrusted to do what they had promised to do. Gaps were filled by random volunteers. Nine hours of intense choreography of people, animals and machines was not micromanaged. It would have ground to a halt.

Our NHS needs this. I wouldn't want to be an NHS manager for all the milk in China, but now that I understand what happened that day, I'd try to be a strange type of manager. Just for a laugh I'd let people decide how to do their own job best and watch from a distance. Patrolling in a golf cart.

If you too seek enlightenment, check out the Medical Equestrian Association website www.medequestrian.co.uk

They have regular training events, the next in Liverpool on 22nd November.

A fair few Doctors dabble in the equestrian arts and more are hypothermic spectators and monetary support to half horse, half child offspring. The MEA focuses on crazed cross country injury management but the principles apply to everything from pony clubs to chasers of furry beasts. The principles are also helpful when encountering the result of haphazard driving on our A roads.

This may all sound like a bit of a road to Damascus experience, but the real gunk I had that day was travelling to Damascus from the opposite direction. Our Muslim Anaesthetist observed Ramadan and sat fasting at our table as we ate our low calorie heart stopper special lunches. A bacon buttie never tasted selfish before.

Medical Equestrian Association Visit to Hong Kong

By Stephen Chadwick, medical correspondent, chairman MEA and Tandem Driver

Five members of the MEA were invited to Hong Kong by the Hong Kong Health authority and the Chinese University Hong Kong to help prepare the local doctors and nurses for the coming Olympic and Paralympic events. Although familiar with flat racing, Hong Kong has a very little experience of other equestrian sports and sought the MEA advice upon medical coverage.

Drawing on experience from covering competitions such as Badminton, Burghley and of course the National Carriage Driving Trials, we presented three courses over three days designed to give the medics the experience (in simulated accidents) and confidence to deal with any major incident at any of the venues during the events. We also gave invited lectures at the Sports Medicine Conference and to the Academic Department of

Emergency Medicine (CUHK). The latter lecture entitled 'The impact of horses' included an explanation of English phrases such as 'pole position' and various pictures of whips driving tandems to illustrate some psychomotor skills that might appear at first glance to be common to drivers and surgeons!

We have made enduring friends and learnt a great deal in an experience that is unlikely to be forgotten. The four other members of the MEA were Suzannah Hoult, Sara Astbury, Dan Perry and Clare Hammell. Stephen, Suzannah and Dan are Surgeons, Clare is an anaesthetist and Sara is a GP. The MEA is an organisation of doctors who provide medical cover at equestrian events throughout the UK/. It runs training courses so that doctors may maintain their prehospital equestrian management skills

The old fashioned approach to c-spine injury!!!!

Reproduced with permission from JRCPE

History: Edward Harrison and the treatment of spinal deformities in the nineteenth century



An extract from *Pathological and Practical Observations on Spinal Diseases*:

On taking my evening walk, I heard a loud cry for help issuing simultaneously from many mouths. I ran to the spot and saw a man lying on the ground. A horse was standing near. Twenty voices anxiously vociferated as I came along saying that he had just fallen from his horse and broken his neck. He lay on the ground motionless and apparently quite dead. I instantly placed my knees against his shoulders and grasping his chin and the back of his head firmly between my hands proceeded

to stretch his neck with all my strength. The patient immediately showed signs of returning animation by moving his limbs and soon afterwards raising himself from the ground. He speedily recovered and remounted his horse. I visualise that he had a subluxation or concussion of his brain or spine. There was then discussion at a dinner party as to what was the cause of it. For my part, I believe that the vertebra was displaced compressing the cord and phrenic nerve.



Chairman's Thoughts 2009

Stephen Chadwick

I am writing this on a very cold January evening. The fire is to my back and my old dog Liquorice is sleeping in front of it. I know that shortly I will have supper with my family, catch up on all the gossip and relax. The horses are in, fed and rugged. The BBC warns us of another frost tonight.

A familiar scenario to many, but I do not want to become complacent particularly about the MEA. We have such a fantastic organisation, one that we can all be proud of. We have an enviable history with our senior members contributing to much in Equestrian Sports Medicine. We have outstanding younger members contributing to our education and providing medical cover at many events. We have had a number of publications in leading Medical and Equestrian Journals. And yet.....

I have an uncomfortable nigggle in the back of my mind. Why do so few of our membership attend our excellent meetings? Is it the day of the week or are there other factors. (I am so sorry I missed the Liverpool meeting, I did have a very valid reason and it was entirely unpredictable). I have floated the idea that our Autumn meeting could be linked to a visit to Olympia. Perhaps include some Christmas shopping too. But what does our membership want? I am going to ask your council to contact as many of you as they can by phone or face to face to get opinions, so that we can come up with options at the next AGM. One option for me would be a Friday meeting at an equestrian event plus plenty of time to watch what's going on or even perhaps a meeting in Europe!! What about a 'wrinklies' camp similar to the old Pony Club camps some of us went on? Ideas would be welcome.

I hand over the chairmanship later this year but I would like to continue in an active role with the MEA. There are two historic events coming up in the near future, firstly our (possible) role in the Olympics and secondly the 25th anniversary. Last year when I took over as chairman I had a vision of Education as our legacy. As you know, the MEA visit to Hong Kong and the development of Doctors at Events focussed our attention and we have delivered a number of good courses directed at different levels of expertise. [D@E](#) runs 'our' courses and we must keep both organisations working symbiotically. It is very early as yet in our relationship but I hope for a long and useful association. But for me, I would like to see the MEA contributing to Equestrian Sports Medicine in a

research capacity. Sponsored partially by Industry and our own efforts (Sponsored rides etc), it would be very fitting to help a young doctor undertake a period of research in a subject that would be of benefit to our sport. To achieve this we need to build or perhaps rebuild bridges with other larger organisations to identify a common goal. If one of our members could deliver an MSc, what better legacy for our 25th? None of this is pie in the sky; it can be achieved if we want it- Credit crunch or not!

Finally I need to give a belated but heartfelt thanks to your Council for all the help and advice and particularly to Jo our secretary without whom the MEA would be a much poorer association.

The BE Awards for outstanding contribution to Equestrian Sport

British Eventing gave a special commendation to Dr John Inman, an MEA member, for his outstanding service to equestrianism, with special mention of Burghley Horse Trials where he has been Chief Medical Officer continuously since 1987.

Para Dressage in Hong Kong 2008 by Sally Nicholson

I am currently a salaried GP in Altrincham but I have a keen interest in sports medicine and equestrianism. I am a medical officer at Bramham, Badminton (Red Cross), and Allerton Park Horse Trials and I have been a council member for the MEA for approximately 2 years. I am also due to start my MSc in Sports and Exercise medicine in April'09. Last year I was lucky enough to be asked to travel with the GB paradressage team to the

Beijing Olympics as their team doctor. All of the equestrian events were to be held at and around the Sha Tin racecourse in Hong Kong, and paradressage was no exception.

My story starts in Hartpury, some 7 months prior to the start of the Games, when I first met the riders and paradressage staff and coaches. In the following 7 months my job was to ensure the riders were organized in terms of medications they were taking,

including organizing the sanction of any banned substances. I also worked alongside the sports science and medicine (SSM) team at the BEF discussing methods in which to prime the riders for the extreme weather conditions - and also how to recover. This involved us visiting heat chambers at a local university and exercising on bikes, treadmills, and even a mechanical horse, with the temperature set at 38-40 degrees! Needless to say, I had the reddest face after about 1 minute! We also had to teach the riders how to increase their fluid intake and monitor their urine concentration. I also attended team training sessions and their quarantine prior to the Games; mainly to ensure no last minute problems.

Prior to the Games I worked closely with Dr Peter Whitehead (CMO Team GB and Director of Human SSM) during the SSM meetings and also in discussing which medications to take with us, and also which dressings. Peter was to travel with the Olympic teams and leave (hopefully) enough kit and medication for us paras! One of my fears for the para riders was skin integrity. Several of the riders wear splints on their limbs and those combined with heat and humidity could spell disaster. Peter and I also worked on the best strategy for jet lag and preparing the riders for travel, and also the best way to cool the riders after competition.

All in all it was a 'preparation prevents p*** poor performance'!!

Finally the scene was set and we were waiting for our plane at Heathrow in our team kit. I have never felt so patriotic, and there were plenty of well wishers which really boosted the team. We travelled well, although some of the coaches required a 'little sedation' for their flying fears.

Once in Hong Kong the heat and humidity hit us. We were allowed to settle into our hotels and rest, and the stables were 'banned' so the horses could recover. They had all travelled well, and the team grooms, vet, and osteopath were giving them 5 star care. The facilities at Sha Tin were outstanding, the stables were fantastic and air conditioned, so they provided solace for all of us in the day (and night) time heat. The Chinese had also air conditioned a whole indoor school so, at times, we could use this arena to school the horses in. The medical team (myself, physiotherapist and psychologist) were staying in a hotel about 10 minutes from the athlete village. Sadly there are only so many 'accreditations' or passes that a team is allowed to gain full access to the venue and village, so we had to go through security every time we entered the village. In terms of logistics, there was a dedicated bus, which travelled regularly from the venue to the village on a secured route. We also had a

team of drivers, which took us from our hotel to either the village or venue (all organised by our very organised performance director).

We were in Hong Kong approximately ten days before the competition started so the horses and humans had time to acclimatize. It went really well all in all, the paras are a dedicated, motivated yet easygoing team and very nice to work with – plus they put up with me shoving drinks at them every 2 minutes, and shouting at them to get in the shade/air con! On the medical side I mainly had GP type complaints including coughs and colds, vertigo, earache, and diarrhoea. Luckily we still had a good supply of stemetil and loperamide! Once the competition started I had my work cut out for me ensuring there were plenty of fluids for the riders and also cooling them after their dressage tests. Certainly some of the cerebral palsy riders struggled in the heat, but only one rider suffered a pressure sore which we had identified and ‘nipped in the bud’ in quarantine. The medical team at Sha Tin were excellent: I was lucky enough to meet with Dr Jimmy Chan and Dr YY (the medical

directors at Sha Tin) whilst they visited Badminton Horse Trials last year. I met up with them socially over there which was fantastic; going out for a Chinese meal with Chinese people ordering your food is a much better option than eating at the ‘Lymm Loung’ Chinese in my village at home!! Luckily I only needed to visit them in the medical centre once for a quick ear syringe!

Another role was to accompany the riders for their dope testing. This normally coincided with them having just won a medal, so you can imagine it’s the last place they want to be, knowing they are just about to be crowned a champion! The Chinese had provided a television for us though so we could watch the rest of the team compete whilst bladders filled!

Before we knew it the competition was over and we managed to haul a huge **10 medals as a squad including team gold!** I have never felt more proud than standing beneath the Union Flag as it flew overhead after winning our medals. It is a feeling I want to experience again and again and hopefully I will in 2012.

Call for volunteers!

The roles of Hon Secretary, Hon. Treasurer, Allied Medical Professional Council Member and IT Officer are all available for next year. The new IT officer post is open to anyone who has some spare time and can keep the website looking interesting, updating the information about meetings and courses and developing the site. The Hon Treasurer keeps track of the 20 or so new members each year, sends in the standing order mandates, issues and deposits cheques and provides a statement for the AGM each year. The Hon Secretary assisted by the Admin Secretary deals with the day-to-day running of the MEA, the membership, the newsletters and helps organise the meetings. A perk is the annual Christmas card from our President!

Please come to the autumn meeting to vote in some fresh blood and support your Association

Date for the diary

MEA members and friends are invited to attend the opening session of the Meeting of the Travelling Surgical Society on 3rd October 2009 at Northwick Park Hospital, London. The session is titled 'Health Care and The Olympics' and will be chaired by Dr. Lloyd-Parry, with Dan Perry, David Zideman and Ian McCurdie speaking.