COULD THIS BE PART OF THE REASON WHY WE ARE LOSING PIGEONS IN DISTANCE RACING?
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It was Thursday afternoon at the Melbourne Bird Veterinary Clinic. The VHA’s first 500-mile race had been flown the previous Monday, after being delayed two days. It had been a good race, with the winner being clocked at 7:12 pm on the day after a 7 am release. The winner was a yearling Janssen/Van Loon BCH. Her owner had noticed on the Wednesday afternoon that she was a bit quiet but now, on returning from work on Thursday afternoon, he found that she was quiet, fluffed and lying on the loft floor with both legs totally paralysed. When disturbed, she attempted to ‘hump’ along the loft floor on her wing butts. On examining her, I was suspicious of a condition called myoglobinuric myositis. Myoglobin is the protein within the muscle. With extreme exertion, muscle cells can break down, releasing this protein into the blood stream. It is excreted from the body through the kidneys but as it passes through the kidneys, it damages them, almost like a chemical burn. If severe enough, this damage can lead to kidney failure and death. Affected birds lose the use of their legs because the nerves to the legs in birds pass right through the centre of the kidney. Any pathology in the kidney can spread to involve the nerves, preventing nerve impulses from passing along their length, leading to a loss of function.

Failing kidneys can’t concentrate urine and so the droppings become very wet. The bird was placed in a urine collection pen. Subsequent tests were positive for myoglobin in the urine. Scanning whole-body x-rays were taken with the bird on its back and side. The principal change observed was that the kidneys were enlarged and had an increased radiodensity (i.e. looked whiter), indicating inflammation within the kidney. Blood was drawn for biochemistry and haematology. A number of severe changes were identified. The packed cell volume is the concentration of red blood cells in the circulation. It goes down with anaemia and up with dehydration. In normal pigeons this should be about 42. This bird’s value was 52. Her blood glucose level, which should have been 12-20, was only 2.7, and her CK (an enzyme that is released into the blood stream when muscles are damaged) was around 3000 when in health it should be less than 480. The bird was severely dehydrated, with low blood sugar and severe muscle damage.

The critical thing with this condition is to dilute the myoglobin as it passes through the kidney so that its damaging effects are minimized. A good analogy is to imagine acid poured on the skin – incredibly destructive – but dilute it 20 times and it might sting a bit but the damage is minimal. The kidneys have two jobs – to excrete the body’s ammonia-based wastes, which in birds are urea and uric acid, and also to maintain a normal level of hydration. As the kidneys are damaged, they lose these abilities. This means that the levels of waste in the blood stream start to rise and the birds lose the ability to conserve fluid and concentrate urine. This means that unless a lot of fluids are given, dehydration quickly occurs. Once pigeons are more than 10% dehydrated, this in itself can be fatal. The good thing, however, is that kidneys have an amazing capacity to repair and provided supportive care can be offered so that the birds can be kept alive, the kidneys will heal and normal function return.
The bird was immediately started on systemic fluids – lactated Ringers with 5% dextrose and medication designed to minimize inflammation in the kidneys. Fluid therapy prevents dehydration and in causing the production of a lot of dilute urine, dilutes the myoglobin as it passes through the kidney.

**The 500-mile winner’s blood profile**

After three days treatment, the hen could stand, and after seven days she was well enough to be collected by her owner. Without veterinary intervention, she would have died.

In Australia, our distance races are being won with quicker and quicker velocities and increasingly by sprint-based families. Ironically, our overall returns are becoming worse. One has to wonder what happens to these print-based birds that do not reach their lofts in say 6-10 hours. If they are prepared to push themselves to the point where their muscles are breaking down, their ability to return as late birds must be compromised.

Graham Davison, the Australian champion fancier, in his presentations, discusses the idea of gait. He draws the analogy of a human sprinter and a marathon runner competing against each other with short- and long-distance pigeons competing in a pigeon race. If they head off together and run at the marathon competitor’s pace, eventually the sprinter will fall behind. If however, they head off at the sprinter’s pace, the marathon runner quickly becomes breathless. Although
he has the potential to run for a long time, the marathon runner quickly becomes breathless if made to run fast. The analogy between these human competitors and sprint and long-distance racing pigeons is real. Pigeons naturally want to keep up with the flock. It may be that long-distance birds’ ability to return is compromised by the pace of sprinters and sprinters after 10 hours have burnt themselves out, with the result being overall poor returns. Who really knows? At least it is something to think about, particularly when one considers that this 500-mile winner of a large federation would have died had she not made her loft or had veterinary intervention upon return not been sought, even though she won.

An x-ray of the bird lying on it’s side  
An x-ray of the bird lying on it’s back

The recovering 500 mile winner