

UNDER THE WEATHER

Know More – IMHA

I saw Max after years, and he did not look good. The spring in his step was gone, and he walked in reluctantly, his head held low. "He has been living in our farmhouse, and was very healthy till three months ago," said his guardian, showing a large medical file. "For three months, the local vets have been treating him for anaemia, but he's getting worse. Is there no cure for anaemia?"

"Anaemia is a symptom, not a disease. If it has been this long standing, there's probably a more serious underlying problem," I said. After a detailed work up, Max was diagnosed with Immune Mediated Hemolytic Anaemia, or IMHA.



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So what exactly is IMHA? It's easier to understand if we break down the name. Anaemia is a lack of red blood cells. Hemolysis means break down or destruction of red cells. Immune mediated means that the body's immune system mediates (or is responsible for), this destruction.

What exactly is the immune system? This is our body's line of defence against invaders such as bacteria, viruses and toxins. It is made of organs like spleen, lymph nodes, thymus and deposits of lymphoid tissue (as in the gastrointestinal tract and bone marrow). Sometimes the immune system wrongly identifies the body's own red blood cells as pathogens and starts attacking and destroying them. This results in destruction of RBCs, causing the anaemia of IMHA. The affected patient shows symptoms of lethargy and tiring, since there are not enough red blood cells to carry oxygen to the tissues. Fainting may occur due to low oxygen levels in the brain. The mucous membranes and gums appear pale.

As the red blood cells are being destroyed, elevated levels of the breakdown products cause a yellowish colour to the skin and membranes that we refer to as jaundice. The urine may contain haemoglobin and appear dark orange or brownish. The pet may breathe faster in an attempt to compensate for the low oxygen levels in blood. If the platelets are also low

in number, bleeding from the nose or blood in the stool may be seen.

It is easy to diagnose anaemia, however the diagnosis of IMHA is quite complex. IMHA may be "primary" with no identified underlying cause or "secondary" to another medical problem. About 65% to 70% of cases are primary. Diseases that can cause secondary IMHA include certain types of cancer, tick transmitted infections or blood parasites. IMHA can also be caused by unpredictable reactions to certain drugs (like antibiotics, aspirin-like drugs, chemotherapy drugs, etc).

There is no specific test for Immune Mediated Hemolytic Anaemia. Instead, the results of various tests help point

to the diagnosis. First, the anaemia usually associated with IMHA is called regenerative anaemia. This is because the body quickly tries to replace blood cells that are lost. Other tests such as Coombs tests, which diagnose antibodies on top of RBCs provide weight to the diagnosis of IMHA. To find out any other disease contributing to IMHA, a urinalysis, chest X-rays and abdominal ultrasonography is also done; blood tests as well, to rule out tick transmitted infections causing secondary IMHA.

Depending on the severity of anaemia, the veterinarian will decide if a blood transfusion is needed. Some dogs at a critical level of anaemia may also need oxygen supplementation. The main treatment of IMHA involves the use of corticosteroids such as prednisolone or dexamethasone to stop the body from attacking its own red blood cells. Sometimes prednisolone is not sufficient, and more potent immunosuppressive drugs such as azathioprine are needed. Cyclosporine is another drug which may be used for long term management of IMHA.

In secondary IMHA, the primary cause of IMHA is also treated. Treatment must continue for weeks to months to assure the body does not continue to destroy the red blood cells.




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