Simplifed version of : Zhai, Q., Tian, C., Deng, Z., Liu, C. and Ma, Q., 2021. Case Report: An Unusual First Manifestation of a Pheochromocytoma. *Frontiers in Endocrinology*, 12.

A year earlier a 30-year-old man had come to the hospital complaining of coughing up blood, sudden chest pain, shortness of breath and palpitations. A lung scan showed a mild infection, and other imaging was normal. He was diagnosed with pneumonia and given antibiotics and a treatment to stop the bleeding. Over the following year he continued to experience sudden bouts of the symptoms, sometimes also vomiting. He came back to the hospital where he was found to be conscious, aware and without fever. His blood pressure and breathing rate were above normal values. A blood test revealed some problems, and high levels of protein and sugar were found in his urine. A lung scan showed signs of bleeding, a symptom called diffuse alveolar haemorrhage. Fluid samples were taken from the airways, and this led to a suspicion of an autoimmune disease, when one's own natural defences attack the body. However, further lab tests did not confirm this. After five days the bleeding cleared up without treatment. Doctors then suspected a heart problem, but tests suggested that the heart was functioning properly.

The patient had high levels of a substance called catecholamine, which is produced by the adrenal glands above the kidneys. A scan of his abdomen showed a mass, and after more lab tests, doctors confirmed the diagnosis of a condition called pheochromocytoma, which is a tumour on the adrenal glands. He was given medication to treat his symptoms and was able to leave intensive care. Two months later he returned to the hospital to have his adrenal gland removed, and the cells of the gland were then examined. This allowed the doctors to confirm the diagnosis. The patient was monitored by the hospital for six months and his symptoms improved.

Normal initial symptoms of this disease are headaches, a racing heart, and sweating. Coughing up blood is rare, but a few cases have been seen. The authors say that this symptom is often overlooked and underestimated. They also state that this sort of tumour usually spreads to other parts of the body eventually.

Diffuse alveolar haemorrhage, the bleeding revealed by the lung scan, is often linked to another disease or is the first sign of a disease affecting the whole body. However the relationship between this bleeding and the condition called pheochromocytoma is not obvious. Due to the coughing up of blood, the team concentrated on lung problems, and did not do a scan of the abdomen at first. They warn that this experience should remind doctors in emergency departments to be aware that this condition cause varying symptoms.