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Paper Poster Session
Non-tuberculous mycobacteria

Disseminated Mycobacterium chimaera infection involving the aortic vascular graft due to a healthcare-associated source presenting early after index surgery with haemopthysis

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Background: A prolonged outbreak of healthcare-associated (HA) infections related to heart surgery with *Mycobacterium chimaera* (*M.chimaera*) has been reported in 4 European hospitals. Contaminated heater-cooler units used during cardiac surgery were identified as source of infection. Two adult cases involving aortic grafts have been reported, both died due to uncontrolled infection. Here we present another case of *M.chimaera* aortic vascular graft infection. Unlike previous cases, this patient presented early at 6 months after index surgery with hemopthysis being the initial complaint and from a not previously affected hospital.

Material/methods: A 71 year-old immunocompetent white male presented with intermittent hemopthysis, dry cough, mild shortness of breath and fever 6 months after implantation of an aortic vascular graft for Type A aortic dissection. Pertinent past medical history included chronic renal insufficiency and a slowly progressing neuroendocrine tumor with hepatic metastases. Findings on presentation: Temperature 38,3°C, O2 93% on ambient air, Leucocytes 12.480 /µl, absolute Lymphocytes 1.040 /µl, Thrombocytes 246.000 /µl, C-reactive Protein 64,8 mg/dl, estimated Glomerular Filtration Rate 30 ml/min, gGT 8 µkat/l. Bacterial and mycobacterial stains of sputum and bronchoalveolar fluid (BAF) were negative as were bacterial cultures. There was no response to sufficient courses of antibiotics. Mycobacterial respiratory cultures grew *M.chimaera* (sputum day 24, BAF day 28). Progressive endoleaks of the aortic graft and a periprosthetic fluid collection were present on consecutive computertomography scans. Endovascular overstenting of the graft was performed. The periprosthetic fluid collection grew *M.chimaera* as did mycobacterial blood cultures taken prior to treatment initiation. Combination therapy with Clarithromycin, Rifabutin, Ethambutol, Levofloxacin and Amikacin was initiated. Amikacin was stopped on day 14. Subsequent mycobacterial blood cultures obtained 2 months after treatment initiation are negative to date (day 21). There is no clinical evidence of uncontrolled infection.

Results: To our knowledge we report the third case of presumed HA-*M.chimaera* aortic vascular graft infection (PUBMED search).Infection became apparent early at 6 months after index surgery, compared to the previously reported duration of 17 and 21 months. Though our patient showed pronounced lymphopenia and CRP elevation, there was no anaemia, thrombocytopenia and elevated transaminases as seen in the previous 2 cases, probably related to early presentation. Like in our case, pneumonitis was diagnosed in one prior case and blood cultures were reported positive in both

cases. While fever was present in all previous cases, shortness of breath was reported in one patient. Our case is the first where hemopthysis was present.

Conclusions: HA-*M.chimaera* aortic vascular graft infection may become symptomatic early after index surgery. Hemopthysis and pneumonitis can be the presenting symptoms, calling for a high index of suspicion in patients with the appropriate history.