Introduction
Pulmonary artery aneurysms are rare which could be congenital or acquired in origin. The primary symptom is haemoptysis which is often massive. Bechet's disease is a chronic systemic collagen vascular disease of unknown origin mainly affecting young men. Pulmonary aneurysms associated with Bechet's disease are pseudoaneurysms and arise as complications of vasculitis and transmural necrosis and suggests poor prognosis with massive haemoptysis associated with a high mortality rate. In most patients these aneurysms are saccular, multiple, bilateral with partial or complete thrombosis of the aneurysm as well as the distal pulmonary artery.

Diagnosis of the aneurysms are by contrast enhanced CT scan and pulmonary artery angiogram. Medical treatment of these patients include cytostatic and corticosteroids which may cause regression of pseudoaneurysms. Recurrent hemoptysis or progression in size of the pseudoaneurysms is common, where endovascular embolisation is a valuable alternative to surgery.

Case report
28 year old male with a past history of recurrent deep vein thrombosis, recurrent oral and genital ulcers, one episode of transient blurring of vision presented to the local hospital with massive haemoptysis and progressive dyspnea. Chest X ray (fig. 1) revealed a large soft tissue mass occupying the lower zone of the R/ lung. CT scan demonstrated two aneurysms in relation to the right pulmonary artery and a thrombus within the apex of the right ventricle. The patient was transferred to the national hospital for specialized management. After initial evaluation a repeat CT scan was done which revealed significant increase of size of the aneurysm to 10 x 12 cm. Due to the rapid increase in size of the aneurysm and the multiplicity of lesions the patient was referred for endovascular management.

Fig. 1 – chest ray PA view showing a large soft tissue opacity in the lower R/ hemithorax.

Diagnostic angiogram under local anaesthesia via jugular venous access (due to the presence of B/L lower limb deep venous thrombosis extending up to the IVC) using a 5F sheath and an angle pig tail catheter confirmed the presence of the two previously diagnosed aneurysms in the Right lung. The larger aneurysm in the lower lobe was supplied by the R/ posterior basal artery (Fig. 2) and the smaller aneurysm in the mid zone filling via right lateral artery (middle lobe)( Fig.3). Both vessels did not demonstrate any distal blood flow.

Fig. 2 - Pre embolisation angiogram showing the large aneurysm in the lower lobe supplied by the by the R/ posterior basal artery and a smaller aneurysm overlapping the R/ pulmonary artery

Fig.3 - Angiogram (oblique view) showing the smaller aneurysm in the mid zone filling via right lateral artery (middle lobe). The larger aneurysm does not show any further filling in this film.
Embolisation was planned at a different sitting after optimizing the patient with cardiothoracic surgical back up under local anaesthesia where the right main pulmonary artery was selectively catheterized via jugular access and a Amplatzer PDA delivery system was positioned proximal to its bifurcation. Super selective catheterisation of the feeding vessels was then performed separately with a 6 F, 0.64” “Guider” guiding catheter (Boston) and successful occlusion of each vessel was achieved immediately proximal to the origin of the aneurysm with 6mm x 7 mm and 8 mm x 7mm vascular plugs (Amplatzer) (Fig. 4, Fig 5).

Complete occlusion of the vessels with cessation of blood flow in to the aneurismal sac was demonstrated by post procedure angiogram (Fig. 6). Patient tolerated the procedure well and had an immediate reduction of his symptoms.

Pre and post contrast enhanced CT scan done 3 days after the procedure demonstrated complete thrombosis of the aneurismal sacs (Fig. 7). The patient was referred for further medical management of Bechet's disease and followup.

**Discussion:**
Our patient who presented with pulmonary artery aneurysms had recurrent oral and genital ulceration (Fig. 8) several episodes of probable eye involvement recurrent deep vein thrombosis, thrombus within the Right ventricle and multiple pulmonary artery aneurysms which satisfies the practical clinical diagnostic criteria for Bechet's disease which was diagnosed retrospectively.

The rapidly enlarging large pulmonary artery aneurysm involving the apical and posterior segments of the R/ lung was impending rupture with a risk of life threatening haemoptysis. Due to the large size of the aneurysm and as there was already thrombosis of the distal vessels, after discussing with the cardiothoracic surgeon and the chest physician it was decided to occlude both feeding branch vessels as distal as possible using Amplatzervascular plugs. Due to the retrievable nature of these plugs prior to release,
it was possible to position the plugs immediately proximal to the origin of the aneurysms thereby salvaging the maximum length of the proximal pulmonary artery. Immediate post procedure angiogram showed complete cessation of blood flow in to both aneurismal sacs indicating successful occlusion of the vessels using a single occlusive devise. Thereby it was possible to treat this patient by endovascular means safely enabling rapid recovery under local anaesthesia avoiding major thoracic surgery under general anaesthesia.

**Conclusion**

Large and multiple pulmonary artery aneurysms leading to life threatening haemospysis can be successfully managed by endovascular means avoiding major surgery as described by this patient with Bechet's disease.