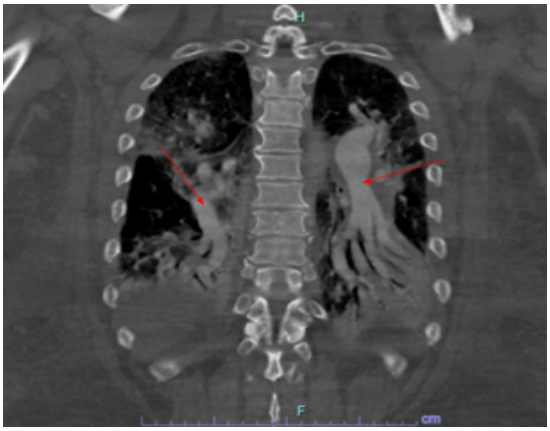
Pulmonary Artery Dilation Secondary to Severe Pulmonary Hypertension

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Pulmonary hypertension (PH) is a complex condition characterized by elevated blood pressure in the arteries of the lungs, leading to increased strain on the heart. This case highlights a 49-year-old African American female with a constellation of comorbidities including hypertension, obstructive sleep apnea, heart failure with preserved ejection fraction (HFpEF), and chronic hypoxic respiratory failure, all contributing to her severe presentation. Her symptoms, worsening lower extremity edema and dyspnea, are classic indicators of PH and right heart strain, ultimately necessitating emergent intubation and mechanical ventilation.

Diagnostic imaging, specifically a CT pulmonary angiogram, revealed significantly enlarged pulmonary arteries, strongly suggestive of chronic pulmonary arterial remodeling. Further invasive assessment through right heart catheterization confirmed severe mixed pulmonary hypertension, classified as both pre- and post-capillary (WHO Group 2/3). This mixed presentation indicates that her PH was driven by a combination of factors, including her underlying left-sided heart failure (post-capillary component) and potentially intrinsic pulmonary vascular disease (pre-capillary component).

Her management involved aggressive interventions such as intravenous diuresis to reduce fluid overload, inhaled nitrous oxide for pulmonary vasodilation, and epoprostenol, a potent prostacyclin analog, to lower pulmonary artery pressures. While she showed initial improvement, her inability to sustain extubation underscored the severity and refractory nature of her PH, complicated by multiple underlying health issues. This case critically emphasizes that mixed pulmonary hypertension demands a multifaceted approach to diagnosis and treatment, often challenging to manage despite advanced therapies, ultimately leading to difficult decisions regarding comfort care.



Biography

Christos Sarantopoulos performed his undergraduate studies at the University of California, Irvine. He embarked on his medical journey by attending medical school at Oakland University Beaumont Hospital. This period of intense study and practical training honed his skills and deepened his commitment to the medical field, preparing him to make significant contributions to patient care. His academic and professional path has been marked by a steadfast dedication to excellence.

Beyond his professional endeavors, he cultivates a rich personal life, finding immense pleasure in the simple joy of walking his dog and the excitement of traveling to new places. These activities serve as essential outlets, offering relaxation and a change of pace from his demanding career. Whether it's the quiet companionship of his dog or the thrill of discovering new cultures and landscapes, these pursuits are integral to his well-being.