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| **Incidence of life-threatening pulmonary embolism before and after the pandemic** |
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| **Introduction/Aim:**  Pulmonary embolism (PE) is a life-threatening condition and patients with COVID-19 are at elevated risk of thromboembolic events. This study aimed to compare the incidence and characteristics of PE cases requiring high-level support in an Australian tertiary hospital before and after emergence of the COVID-19 pandemic.  **Methods:**  We comprehensively reviewed medical records of all patients admitted to intensive care or coronary care units with principal diagnoses of PE in 2019 and 2022. Demographics and clinical characteristics were extracted. Baseline characteristics were compared using t-tests for continuous variables and chi-square tests for categorical variables.  **Results:**  Twenty patients presented with high and high-intermediate PE in 2019 and 36 patients in 2022, an increase of 80%. Average age trended higher in 2022 compared with 2019: 64.7±16.7yrs vs. 57.1±19.5yrs, p=0.13. Several comorbidities were non-significantly more prevalent in 2022 compared to 2019 patients, including chronic lung disease (25% vs. 10%, p=0.18), and pre-existing heart failure (14% vs. 0%, p=0.081). Fewer were taking hormonal therapy in 2022 (2.8% vs. 20%, p=0.03). There were no significant differences in size or location of PE on CTPA, or acute haemodynamic status. More patients had CTPA-pulmonary artery enlargement in 2022 (53% vs. 25%, p=0.045), however no difference in echocardiogram parameters or troponins. Eight patients in 2022 had documented preceding COVID-19 illness, [median 38days (range 12-107days) between positive result and PE hospitalisation], including 4 within 30days of infection. Rates of intervention were not different. Five patients in the combined cohort died within 30days (2 in 2019, 3 in 2022; none with preceding COVID-19). Patients with fatal outcomes had higher respiratory rates at presentation, (38 vs. 24 breaths/min, p=0.05) but no differences in initial haemodynamics.  **Conclusion:**  The incidence of PE requiring higher level care was substantially higher in 2022 compared to 2019. An older, more comorbid patient population and the COVID-19 pandemic are potential contributors. |
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