

The impact of COVID-19 pandemic on aortic valve surgical service: a single centre experience.

Dimitrios Vlastos¹, Ishaansinh Chauhan², Kwabena Mensah², Maria Cannoletta², Athanasios Asonitis¹, Ahmed Elfadil², Mario Petrou², Anthony De Souza¹, Cesare Quarto¹, Sunil Bhudia², John Pepper¹, and GEORGE ASIMAKOPOULOS¹

¹Royal Brompton Hospital

²Royal Brompton and Harefield NHS Foundation Trust

November 25, 2020

Abstract

Background The coronavirus-disease 2019 (COVID-19) pandemic imposed an unprecedented burden on the provision of cardiac surgical services. The reallocation of workforce and resources necessitated the postponement of elective operations in this cohort of high-risk patients. We investigated the impact of this outbreak on the aortic valve surgery activity at a single two-site centre in the United Kingdom. **Methods and Results** Data were extracted from the local surgical database, including the demographics, clinical characteristics, and outcomes of patients operated on from March 2020 to May 2020 and compared with the respective 2019 period. The experience of centres world-wide was invoked to assess the efficiency of our services. There was a 38.2% reduction in the total number of operations with a 70% reduction in elective cases, compared with a 159% increase in urgent and emergency operations. The attendant surgical risk was significantly higher [median Euroscore II was 2.7 [1.9-5.2] in 2020 versus 2.1 [0.9-3.7] in 2019 ($p=0.005$)] but neither 30-day survival nor freedom from major post-operative complications (re-sternotomy for bleeding/tamponade, transient ischemic attack/stroke, renal replacement therapy) was compromised ($p>0.05$ for all comparisons). **Conclusion** RBHT managed to offer a considerable volume of aortic valve surgical activity over the first COVID-19 outbreak to a cohort of higher-risk patients, without compromising post-operative outcomes. A backlog of elective cases is expected to develop, the accommodation of which after surgical activity normalisation will be crucial to monitor.

Hosted file

RBHT COVID aortic valve FINAL.pdf available at <https://authorea.com/users/378786/articles/495185-the-impact-of-covid-19-pandemic-on-aortic-valve-surgical-service-a-single-centre-experience>