1638 Decade-Long Trends in Surgery for Acute Type A Aortic Dissection

U. Benedetto[1], S. Sinha[1], A. Dimagli[1], G. Cooper[2], G. Mariscalco[3], R. Uppal[4], N. Moorjani[5], G. Krasopoulos[6], U. Trivedi[7], G. Angelini[1], E. Akowuah[8], G. Tsang[9]

[1]*Bristol Heart Institute, Bristol, United Kingdom,* [2]*Northern General Hospital, Sheffield, United Kingdom,* [3]*Glenfield Hospital, Leicester, United Kingdom,* [4]*St. Bartholomew's Hospital, London, United Kingdom,* [5]*Royal Papworth Hospital, Cambridge, United Kingdom,* [6]*Oxford Heart Centre, Oxford, United Kingdom,* [7]*Royal Sussex County Hospital, Brighton, United Kingdom,* [8]*The James Cook University Hospital, Middlesbrough, United Kingdom,* [9]*Southampton General Hospital, Southampton, United Kingdom*

Background: Little is known about unwarranted variations in care and outcomes of patients who undergo surgical repair for type A acute aortic dissection(TAAD). We aim to investigate decade-long trends in TAAD surgical repair in England.

Method: Retrospective review of the National Institute for Cardiovascular Outcomes Research (NICOR) National Adult Cardiac Surgery Audit (NACSA) registry from January 2009 to December 2018 , which prospectively collects demographic and peri-operative clinical information for all adult cardiac surgery procedures in the UK.

Results: Over the 10-year period,3,686 TAAD patients underwent surgical repair in England. A steady doubling in the overall number of operations conducted in England was observed from 237 cases recorded in 2009 to 510 in 2018. Number of procedures per hospital per year also doubled, from 10 in 2009 to 21 in 2018. The risk profile of the operated patients remained unchanged. Overall, in-hospital mortality was 17.4% with a trend toward lower mortality in the most recent years (from 22.8% in 2009 to 14.7% in 2018). There was a significant variation in operative mortality across regions with a trend towards lower mortality in regions with a high-volume hospital.

Conclusions: Surgery is the only treatment for acute TAAD but is associated with high mortality. Prompt diagnosis and referral to a specialist center is paramount. The number of operations conducted in England has doubled in 10 years and the associated survival following surgery has improved. Regional variations exist in service provision with a trend towards better survival in high volume centers.