Toward standard abbreviations and acronyms for use in articles on aortic disease

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ABSTRACT

Objectives: Academic medical literature is fraught with complex article-specific acronyms and abbreviations that can impair communication and make reading arduous. Our goal is to ease frustration with bespoke, inconsistent, and variable sets of abbreviations that currently exist for common aorta-related terminology (eg, anatomy, imaging, disease, and therapy). We hope to ease reading and improve communication in the aortic sphere of cardiovascular literature.

Methods: We reviewed a total of 205 published references related to aortic disease, including a systematic review of aorta-related articles in the Journal of Thoracic and Cardiovascular Surgery from the years 2020 and 2021. The array of variable definitions, abbreviations, and acronyms encountered in different papers that refer to the same terminology was striking, revealing that there were few standardized abbreviations in the aortic literature. We cataloged these terms, their associated abbreviations, and their frequency of use, and compiled a list of proposed standard abbreviations for commonly used terms that could be implemented uniformly in articles written about aortic diseases.

Results: We present suggested acronyms and abbreviations for common terminology related to the aorta. It is anticipated that this standard list will evolve over time as the literature and technology of the field grows and develops.

Conclusions: A proposed standard set of acronyms and abbreviations for aorta-related terminology is provided that, if found useful, could be implemented broadly in the aortic literature. (JTCVS Open 2022;10:34-8)

Among the most onerous aspects of reading scientific research is familiarizing oneself with the plethora of article-specific acronyms and abbreviations. Readers often struggle to remember the exact meaning of each abbreviation in an article at hand, and, need to move up and down the article to find its definition at first use. A combination of increasingly complex research, highly specific terminology, and strict word and character limits is forcing the use of more and more abbreviations. Despite an intention to enhance clarity and ease reading, acronyms and abbreviations can counterproductively become a burden. For many readers, acronyms have contributed to confusion and frustration. In fact, some critics of acronyms and abbreviations have facetiously coined derogatory neologisms for this supposed syndrome.

In the aortic space, many acronyms and abbreviations have arisen to describe anatomic structures, clinical events and syndromes, imaging findings, and surgical and endovascular therapies. In a review of the literature for an
TABLE 1. Heterogeneity of abbreviations used in reference to type A thoracic aortic dissection in Journal of Thoracic and Cardiovascular Surgery articles published during 2020 and 2021

| Abbreviation | Entity |
|--------------|--------|
| AAAD         | Acute type A aortic dissection |
| A-AD         | Type A aortic dissection |
| AAD*         | Acute aortic dissection |
| AAD          | Acute type A aortic dissection |
| AADA         | Acute aortic dissection type A |
| aTAAD*       | Acute type A aortic dissection |
| ATAAD*       | Acute type A aortic dissection |
| ATAD         | Acute type A dissection |
| TAAAD        | Type A acute aortic dissection |
| TAAD*        | Type A aortic dissection |
| TAD*         | Thoracic aortic dissection |
| TAD          | Type A dissection |
| Type A TAD   | Type A thoracic aortic dissection |

*Acronyms that have also been used in the literature to refer to other aortic terminology.

upcoming article, \(^{3-35}\) an overwhelming array of inconsistent abbreviations became apparent. \(^{36-56}\) After tallying these references, we systematically reviewed all aorta-related articles published in the Journal of Thoracic and Cardiovascular Surgery during the years 2020 and 2021. A total of 205 references (inclusive of the initial search and the systematic review) were evaluated. The high degree of variability discovered presents unwanted opportunities for miscommunication between researchers and target audiences as well as foments frustration among readers. It was found that many specific abbreviations had different meanings in different articles. For example, in the literature reviewed, TAAD was used as a general term to mean thoracic aortic aneurysms and dissections, as well as a more specific term for both type A aortic dissection and thoraco-abdominal aortic dissection. \(^{12-14,24}\) Conversely, there were 13 different acronyms or terms used to denote acute type A thoracic aortic dissection \(^{12,15,21,30}\) This finding alone undoubtedly demonstrates that there is a need for an organized method of presenting common aortic terminology in the primary literature.

We present a suggested master list of acronyms and abbreviations related to aortic disease that could be used more consistently across journals to achieve both clarity and brevity \(^{1}\) (Figure 1 and Table 2). Ideally, a single set of standard abbreviations will be used collaboratively among journals within this specialty to minimize the so-called word soup of aortic acronyms that currently exists. Toward this end, we suggest that these acronyms be implemented by all journals that publish frequently on aortic diseases via their Information for Authors document (or the equivalent) to encourage this standardization within the literature. Such an approach would guide authors on what acronyms, if any,
to use if they wish to publish on aortic diseases in those journals. This would not replace current conventions to define all acronyms at first use—this is still needed for transparency and clarity. The suggested list can be updated as the literature demands or at regular intervals to reflect new terminologies and therapies. We hope that the widespread implementation of such a list will ease writing, improve communication, and make reading of individual papers less onerous to the reader.

**CONCLUSIONS**

The suggested list is a starting point toward a communal master list of aortic acronyms and abbreviations. We

| Table 2. Suggested list of standard abbreviations and acronyms for aorta-related terminology | Abbreviation | Entity |
| --- | --- | --- |
| AA* | Aortic aneurysm | |
| AAA | Abdominal aortic aneurysm | |
| AAD | Acute aortic dissection | |
| AAE | Adverse aortic event(s) | |
| AAR | Ascending aortic replacement | |
| AAS | Acute aortic syndrome | |
| ACP | Antegrade cerebral perfusion | |
| AD* | Aortic dissection | |
| AI | Aortic insufficiency | |
| Ao | Aorta | |
| AoArch | Aortic arch | |
| AoRoot | Aortic root | |
| AR | Aortic regurgitation | |
| ARR | Aortic root replacement | |
| AS | Aortic stenosis | |
| AscAD | Ascending aortic dissection | |
| AscAo | Ascending aorta | |
| ATAA | Ascending thoracic aortic aneurysm | |
| ATS | Arterial tortuosity syndrome | |
| AU | Aortic ulcer | |
| AV | Aortic valve | |
| BArch | Bovine arch | |
| BAV | Bicuspid aortic valve | |
| CA | Celiac artery | |
| CoA | Coarctation of the aorta | |
| CTA | Computed tomography angiography | |
| DescAo | Descending aorta | |
| DHCA | Deep hypothermic circulatory arrest | |
| DTAA | Descending thoracic aortic aneurysm | |
| DTAD | Descending thoracic aortic dissection | |
| DT Ao | Descending thoracic aorta | |
| EVAR | Endovascular aneurysm repair | |
| FEVAR | Fenestrated endovascular aneurysm repair | |
| FL | False lumen | |
| HAR | Hemiarch replacement | |
| HCA | Hypothermic circulatory arrest | |
| IA | Innominate artery | |
| IAbdAD | Isolated abdominal aortic dissection | |
| IAD | Iatrogenic aortic dissection | |
| IMA | Inferior mesenteric artery | |
| IMH | Intramural hematoma | |
| LCCA | Left common carotid artery | |
| LRA | Left renal artery | |
| LSCA | Left subclavian artery | |
| LV | Left vertebral artery | |
| MRA | Magnetic resonance artery | |
| PAU | Penetrating aortic ulcer | |
| RCCA | Right common carotid artery | |
| RCP | Retrograde cerebral perfusion | |
| RRA | Right renal artery | |
| RSCA | Right subclavian artery | |
| RVA | Right vertebral artery | |
| SAVR | Surgical aortic valve replacement | |
| SMA | Superior mesenteric artery | |
| SoV | Sinuses of Valsalva | |
| STJ | Sinotubular junction | |
| TAA* | Thoracic aortic aneurysm | |
| TAAA* | Thoracoabdominal aortic aneurysm | |
| TAAD* | Thoracic aortic aneurysms and dissections | |
| TabdAD | Thoracoabdominal aortic dissection | |
| TabdAo | Thoracoabdominal aorta | |
| TAD* | Thoracic aortic dissection | |
| Tao | Thoracic aorta | |
| TAR | Total arch replacement | |
| TAV | Tricuspid aortic valve | |
| TAVI | Trans-catheter aortic valve implantation | |
| TAVR | Trans-catheter aortic valve replacement | |
| TEE | Transesophageal echocardiography | |
| TEVAR | Thoracic endovascular aneurysm repair | |
| TL | True lumen | |
| TTE | Transthoracic echocardiography | |
| Type A TAD* | Type A thoracic aortic dissection | |
| Type B TAD* | Type B thoracic aortic dissection | |
| VSARR | Valve-sparing aortic root replacement | |

*Preceding term specifiers should be written out unless they are used extensively. These include but are not limited to: acute, chronic, complicated, uncomplicated, sporadic, familial, heritable, iatrogenic, isolated, localized, and spontaneous.
welcome suggestions for improvement—via alternatives or additions to the entries in this suggested list.

Conflict of Interest Statement
Dr Elefteriades is the principal of CoolSpine. All other authors report no conflict of interest.

The Journal policy requires editors and reviewers to disclose conflicts of interest and to decline handling or reviewing manuscripts for which they have a conflict of interest. The editors and reviewers of this article have no conflicts of interest.

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