Atherosclerosis: The XXIst Century Epidemic
A Meeting at the Vatican

Conrado J. Estol, MD, PhD, FAAN

See related articles, pages 3336, 3341, 3651, and 3655.

“So oft in theologic wars, The disputants, I ween, Rail on in utter ignorance Of what each other mean, And prate about an Elephant Not one of them has seen!”
—John Godfrey Saxe’s version of the Indian legend, “Blind men and the elephant”

Major advances were made in the past decade in the understanding of endothelial injury and the key role of inflammation and atherosclerosis in cardiovascular disease (CVD). A large number of trials for drugs and devices have been successfully completed and it became clear that prevention should be at the core of efforts against CVD. However, every single publication on CVD highlights the “atherosclerosis epidemic” and the continuously increasing burden of vascular events faced by people from all regions in the world. The question is, can anything be done to stop and reverse this devastating trend? To explore possible answers to that question, a meeting was convened at the Pontifical Academy of Sciences in the Vatican.

Of the approximately 60 million people who die per year worldwide, 18 million (30%) do so as a consequence of CVD. In other words, 160,000 deaths occur daily of which almost 50,000 are secondary to CVD (equivalent to 100 Boeing 777 aircraft full of people crashing everyday). All of the known risk factors for CVD similarly affect all races and ethnicities.1

Major advances were made in the past decade in the understanding of endothelial injury and the key role of inflammation and atherosclerosis in cardiovascular disease (CVD). A large number of trials for drugs and devices have been successfully completed and it became clear that prevention should be at the core of efforts against CVD. However, every single publication on CVD highlights the “atherosclerosis epidemic” and the continuously increasing burden of vascular events faced by people from all regions in the world. The question is, can anything be done to stop and reverse this devastating trend? To explore possible answers to that question, a meeting was convened at the Pontifical Academy of Sciences in the Vatican.

Of the approximately 60 million people who die per year worldwide, 18 million (30%) do so as a consequence of CVD. In other words, 160,000 deaths occur daily of which almost 50,000 are secondary to CVD (equivalent to 100 Boeing 777 aircraft full of people crashing everyday). All of the known risk factors for CVD similarly affect all races and ethnicities.1

Of the approximately 60 million people who die per year worldwide, 18 million (30%) do so as a consequence of CVD. In other words, 160,000 deaths occur daily of which almost 50,000 are secondary to CVD (equivalent to 100 Boeing 777 aircraft full of people crashing everyday). All of the known risk factors for CVD similarly affect all races and ethnicities. The question is, can anything be done to stop and reverse this devastating trend? To explore possible answers to that question, a meeting was convened at the Pontifical Academy of Sciences in the Vatican.

Of the approximately 60 million people who die per year worldwide, 18 million (30%) do so as a consequence of CVD. In other words, 160,000 deaths occur daily of which almost 50,000 are secondary to CVD (equivalent to 100 Boeing 777 aircraft full of people crashing everyday). All of the known risk factors for CVD similarly affect all races and ethnicities. The question is, can anything be done to stop and reverse this devastating trend? To explore possible answers to that question, a meeting was convened at the Pontifical Academy of Sciences in the Vatican.

Of the approximately 60 million people who die per year worldwide, 18 million (30%) do so as a consequence of CVD. In other words, 160,000 deaths occur daily of which almost 50,000 are secondary to CVD (equivalent to 100 Boeing 777 aircraft full of people crashing everyday). All of the known risk factors for CVD similarly affect all races and ethnicities. The question is, can anything be done to stop and reverse this devastating trend? To explore possible answers to that question, a meeting was convened at the Pontifical Academy of Sciences in the Vatican.
privilege to meet with the Holy Father who had a personal interest in our discussions (it is public knowledge that the Pope had suffered at least 1 vascular event at the time he was still a Cardinal).

The venue of this meeting merits a brief description. The Pontifical Academy of Sciences was established in Rome in 1603 under the patronage of Pope Clement VIII and the leadership of Galileo Galilei. It was lastly refounded in 1936 by Pope Pio XI who gave it the present name. Since then, the objective of the Academy has been “investigating specific scientific subjects belonging to individual disciplines and with the promotion of interdisciplinary co-operation.” The headquarters of the Academy is the “Casina Pio IV,” built by the architect Pirro Ligorio in 1561 originally as the summer residence of the Pope. The Academy is composed of a number of academicians selected independently of national, political, or religious origin, including at present >20 Nobel Prize winners (many appointed before receiving this award). The lectures presented at the meetings are published by the Pontificiae Academiae Scientiarum Scripta Varia. Life at the Vatican is in every sense a unique experience. Participants of an Academy meeting are all guests at the Domo Santa Marta (House of St Martha) built by John Paul II a few steps away from St Peter’s Cathedral for the Cardinals participating in the conclave in case of a new Pope’s election. For this reason, accommodations are comfortable yet austere with no WiFi access to protect the secrecy of the event it was built for. A nice uphill walk leads to the Academy through peaceful paths that not only overlook wonderful views of the Vatican apartments and museums, but also serve for the afternoon walks of the Holy Father (on 1 occasion, guards on our way standing at the edge of the narrow paths alerted us to the presence of the Pope). We also enjoyed the privilege of a 7 AM solitary visit to the Sistine Chapel and a quiet moment for reflection inside St Peter’s Cathedral at the time it was closed to the public the day of the Pope’s audience at St Peter’s Square. It seemed that the historical scientific context provided by the Pontifical Academy of Sciences was an appropriate venue for the purpose of the “Atherosclerosis” meeting.

After 2 days of fascinating individual presentations, a consensus statement was drafted by all participants. In summary, emphasis was placed on including prevention, more than acute treatment, as the message for large-scale audiences. Because risk factor modification should begin as early as possible in life, education about vascular disease, risk factor control, and healthy behavior was favored for inclusion in the mandatory school curricula. Regarding treatment, it was recognized that the limited number of existing vascular neurologists and the lack of access to adequate coronary and cerebrovascular care are high-priority problems. Other conclusions were that medications are underused or not economically accessible and thus the polypill may overcome economic and compliance limitations; that telemedicine has been proven effective in underserved world regions; that genetic research should advance to detect as yet unknown vascular risk factors and explain the outliers encompassing those with risk factors and no vascular events as well as those who do not have risk factors and have symptomatic atherosclerosis; and that high-income countries should lead and coordinate efforts devoted to decrease the number of events in low-income regions. At the meeting there was strong consensus in that our generation of physicians and medical societies has “the duty and responsibility to make Vascular Disease Prevention the number one priority in the World’s Health Agenda to ensure that Vascular Disease Prevention translates from wishful thinking to reality.”

Although science has made significant achievements in the research against atherosclerosis, all recognized vascular risk factors across the world are undertreated or just not treated. The present gap between theory and action in vascular disease results in a rising toll of premature deaths, survivors with disabilities, and an aging population with cognitive impairment.

The Vatican Meeting, “Atherosclerosis: the XXIst Century Epidemic,” contributed to creating better awareness of this problem by generating an interspecialty collaboration among world leaders of opinion to disseminate the contents of their valuable assessments and call attention to this devastating disease.

Disclosures
None.

References

Key Words: cardiovascular disease — prevention — stroke — Vatican Pontifical Academy of Sciences
Atherosclerosis: The XXIst Century Epidemic: A Meeting at the Vatican
Conrado J. Estol

Stroke. 2011;42:3338-3339; originally published online November 3, 2011;
doi: 10.1161/STROKEAHA.111.640300
Stroke is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2011 American Heart Association, Inc. All rights reserved.
Print ISSN: 0039-2499. Online ISSN: 1524-4628

The online version of this article, along with updated information and services, is located on the
World Wide Web at:
http://stroke.ahajournals.org/content/42/12/3338

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published in Stroke can be obtained via RightsLink, a service of the Copyright Clearance Center, not the Editorial Office. Once the online version of the published article for which permission is being requested is located, click Request Permissions in the middle column of the Web page under Services. Further information about this process is available in the Permissions and Rights Question and Answer document.

Reprints: Information about reprints can be found online at:
http://www.lww.com/reprints

Subscriptions: Information about subscribing to Stroke is online at:
http://stroke.ahajournals.org//subscriptions/