A consequence of untreated hypertension: giant aneurysm of the aortic arch

An 81-year-old woman presented at our outpatient clinic with complaints of a 15-day increased severity of back pain which has lasted for almost one year. The continuous back pain was reported to be unassociated with position, exertion or respiration. She had a medical history of hypertension with non-regular medication use. Physical examination revealed her blood pressure to be 165/90 mmHg and a heart rate of 75 beats/min. Cardiac auscultation revealed a mild diastolic murmur and an S4 heart sound in the aortic focus. Coarse breath sounds were heard on the left. The superior mediastinum was observed to be dilated on chest X-ray (Figure A). Examinations of the other systemic were normal. Transthoracic echocardiography revealed normal left ventricular functions, and markedly increased thickness of the walls. A contrast enhanced computed tomography was performed following observation of an image around the lumen on suprasternal evaluation, likely to be consistent with a thrombus (Figure B). An 11x7 cm thrombosed dissecting giant aneurysm of the aortic arc was observed from the origin of the left subclavian artery. The aneurysm was limited to the aortic arc, terminating at the level of the descending aorta (Figure C, D). The patient refused surgical repair which was recommended. She was later discharged after initiating medical treatment with antihypertensives and beta blockers. No complications were reported during the subsequent six months following diagnosis of the giant aortic arc aneurysm.

Figures. (A) Aneurysmatic image of the aorta on posterior chest X-ray. (B) Suprasternal evaluation of the transthoracic echocardiography image consistent with the lumen (L) and surrounding thrombus (T). Computed tomography images: (C) aneurysm and thrombus of the aortic arc; (D) no aneurysmatic image of the ascending and descending aorta.