American Journal of Case Reports

e-ISSN 1941-5923
© Am J Case Rep, 2026; 27: e954018
DOI: 10.12659/AJCR.954018

Received: 2026.05.06
Accepted: 2026.09.09
Available online: 2026.11.02
Published: 2026.XX.XX

Acute Type A Aortic Dissection Temporally Associated With Orgasm During Masturbation in a 41-Year-Old Man

Authors' Contribution:
Study Design A
Data Collection B
Statistical Analysis C
Data Interpretation D
Manuscript Preparation E
Literature Search F
Funds Collection G

ABDEF 1 Rawad Daniel Arja
ABDEF 1 Erwin Johann L. Tabucanon
BDEF 1 Jan Philip Dela Rosa
BDEF 1 Emily Naomi Rados
ADE 2 Kevin Tsui

1 Internal Medicine Residency Program, Valley Health System, Las Vegas, NV, USA
2 Department of Pulmonary and Critical Care Medicine, Spring Valley Hospital Medical Center, Las Vegas, NV, USA

Corresponding Author: Erwin Johann L. Tabucanon, Valley Health System GME Consortium, 6655 S Cimarron Road, Suite 100, Las Vegas, NV 89113, USA
Phone: +1 702-853-3562, e-mail: erwinjohannt1990@gmail.com
Financial support: None declared
Conflict of interest: None declared

APPROVED GALLEY PROOF

Patient: Male, 41-year-old
Final Diagnosis: Acute Stanford type A aortic dissection
Symptoms: Chest pain • back pain • abdominal pain • nausea • vomiting • diaphoresis
Clinical Procedure: —
Specialty: Cardiology

Objective: Unusual clinical course
Background: Acute type A aortic dissection is a life-threatening emergency. Sexual activity can produce transient hemodynamic stress, but causal attribution is difficult when vascular risk factors or substance exposures are present.
Case Report: A 41-year-old man with schizoaffective disorder, bipolar type, treated with sertraline and olanzapine developed sudden tearing chest pain radiating to the abdomen and back at orgasm during masturbation. At follow-up, he reported prior hypertension identified during an earlier emergency department visit without subsequent antihypertensive therapy, and daily cannabis use with his usual amount smoked several hours before symptom onset. Toxicology was positive for cannabinoids and opiates; the source of the opiate result could not be established. His emergency department blood pressure was 195/102 mm Hg. Computed tomography angiography was interpreted as an acute Stanford type A dissection originating in the arch, involving the posterior ascending aorta, and extending to the right common iliac artery with preserved major branch-vessel perfusion. He received esmolol and nicardipine and was transferred to a tertiary cardiovascular center. Five months later, chest radiography documented a thoracic aortic endograft. Complete outside-hospital procedural records were unavailable, so the exact repair technique and postoperative course could not be confirmed.
Conclusions: Symptoms began at orgasm, supporting a temporal association but not causation. Patient-reported prior hypertension and recent cannabis exposure were possible predisposing or contributing factors. Acute aortic syndrome should be considered when abrupt severe chest or back pain occurs after sexual activity.

Keywords: Dissection, Ascending Aorta • Chest Pain • Hypertension • Tomography Scanners, X-Ray Computed • Orgasm • Sexual Behavior

Full-text PDF: https://www.amjcaserep.com/abstract/index/idArt/954018

1953 1 1 9

Publisher's note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher

This work is licensed under Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0)

Indexed in: [PMC] [PubMed] [Emerging Sources Citation Index (ESCI)] [Web of Science by Clarivate]

APPROVED GALLEY PROOF

Introduction

Acute type A aortic dissection is a medical emergency in which an intimal tear permits blood to enter the aortic media and create a false lumen. Mortality rises rapidly without definitive treatment [1]. Established predisposing conditions include hypertension, heritable thoracic aortic disease, bicuspid aortic valve, and preexisting aortic aneurysm [2].

Sexual activity produces transient increases in sympathetic tone, heart rate, and blood pressure [3,4]. In a physiologic study that included male self-stimulation, cardiovascular workload increased during sexual activity and peaked briefly around orgasm [3]. Masturbation can therefore produce transient hemodynamic stress similar in principle to partnered sexual activity, although this physiologic plausibility does not establish a causal relationship with aortic dissection.

In a retrospective series of 365 patients with acute type A aortic dissection, symptoms during sexual intercourse were reported in 11% of men younger than 60 years, while physical exertion was the most commonly identified provoking circumstance [5]. Masturbation-associated dissection remains rare, with 3 published case reports [6-8]. These reports occurred in patients with additional comorbidities or risk factors, emphasizing that temporal association should not be interpreted as proof of primary causation.

We report an acute Stanford type A aortic dissection temporally associated with orgasm during masturbation in a 41-year-old man. Because the patient also reported prior hypertension without prior antihypertensive therapy and recent cannabis exposure, the case is presented as a multifactorial event in which orgasm was the immediate temporal circumstance rather than a proven cause.

Case Report

A 41-year-old man with a history of schizoaffective disorder, bipolar type, presented to the emergency department with sudden severe chest pain. The pain began at the moment of orgasm during masturbation and was described as tearing, radiating from the chest to the upper abdomen and back. He also reported nausea, vomiting, diaphoresis, and transient hearing difficulty. He denied syncope, shortness of breath, focal weakness, or vision changes. Emergency medical services recorded a blood pressure of 173/86 mm Hg with normal oxygen saturation, and no neurologic deficits were noted in the field.

Additional history obtained directly from the patient during follow-up clarified relevant predisposing and potentially confounding factors. He reported that he had previously been told he had hypertension during an earlier emergency department visit for weakness associated with hypokalemia, but no antihypertensive medication had been prescribed before the dissection. He did not recall prior blood pressure values, and the severity and chronicity of hypertension before the dissection were unavailable. He reported daily cannabis use, typically approximately 3 to 4 small bowls per day by smoking, and stated that he had used his usual amount several hours before symptom onset. At the time of the event, he reported no cigarette, alcohol, cocaine, methamphetamine, pre-workout supplement, or stimulant medication use; energy drink use was infrequent, approximately twice monthly. He reported taking sertraline and olanzapine regularly, although he did not recall the doses. Because he was adopted, family history of aortic aneurysm, dissection, sudden unexplained death, or heritable connective-tissue disease was unavailable. He denied prior similar chest or back pain, known aortic or cardiac disease, or prior aortic imaging.

Upon arrival at the emergency department, his blood pressure was 195/102 mm Hg and heart rate was approximately 60 beats per minute. Oxygen saturation was 93% to 95% while receiving 4 L/min of oxygen by nasal cannula. He appeared anxious but was alert and fully oriented. Cardiovascular examination revealed a regular rhythm without murmurs, and the lungs were clear. The abdomen was soft and non-tender, distal pulses were intact, and no focal neurologic deficits were present.

Laboratory evaluation demonstrated leukocytosis with a white blood cell count of 13.69×10^9/L and neutrophilia, with an absolute neutrophil count of 11.70×10^9/L. D-dimer was elevated at 3.11 mg/L fibrinogen-equivalent units. Electrolytes and renal function were normal, and serial troponin values remained normal (4.3, 4.2, and 4.0 ng/L). Urinalysis was unremarkable. Toxicology was positive for cannabinoids and opiates, with other tested substances negative. During follow-up, the patient denied taking opioid or analgesic medication before calling 911 and did not recall receiving opioids from emergency medical services. He was uncertain whether an opioid was administered after hospital arrival before urine collection. The timing of any hospital-administered opioid relative to toxicology sampling could not be confirmed; therefore, the source and clinical significance of the positive opiate result could not be established.

Computed tomography angiography of the chest, abdomen, and pelvis was interpreted as showing an acute Stanford type A aortic dissection originating within the aortic arch and extending retrograde into the posterior ascending thoracic aorta, then distally through the descending thoracic and abdominal aorta to the right common iliac artery (**Figure 1**). Because the ascending aorta was involved, the dissection met Stanford type A criteria [2]. Both true and false lumens demonstrated

This work is licensed under Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0)

Indexed in: [PMC] [PubMed] [Emerging Sources Citation Index (ESCI)] [Web of Science by Clarivate]

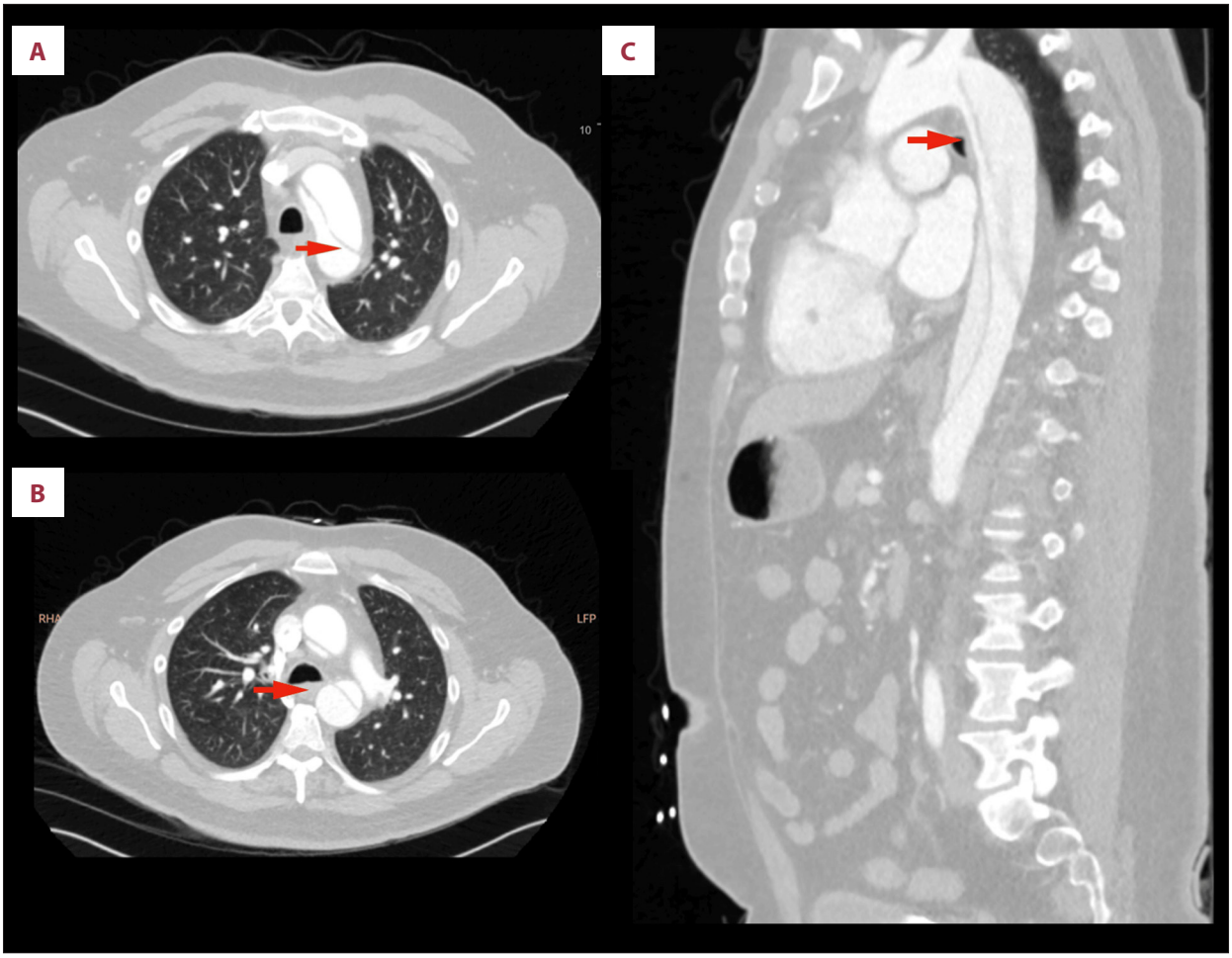


Figure 1. CTA showing acute Stanford type A aortic dissection. (**A**) Axial CTA at the aortic arch demonstrates the intimal flap (red arrow). (**B**) A second axial CTA view demonstrates the dissection flap and true and false lumens (red arrow). (**C**) Sagittal CTA demonstrates longitudinal extension of the dissection (red arrow). CTA, computed tomography angiography.

preserved flow. The dissection extended into the proximal superior mesenteric artery without occlusion, while the celiac trunk, renal arteries, inferior mesenteric artery, and iliac vessels remained patent. No pericardial effusion or pulmonary embolism was identified.

The presenting radiology interpretation and cardiothoracic surgical assessment described the process as acute. The patient denied previous similar symptoms or known aortic disease; however, no prior aortic imaging was available for comparison, and detailed imaging markers used to distinguish acute from chronic dissection were not available for independent review. An acute-on-chronic component therefore could not be completely excluded.

The patient was admitted to the intensive care unit for antiimpulse therapy. Esmolol infusion was initiated to maintain a target heart rate below 60 beats per minute, followed by nicardipine to maintain systolic blood pressure below 110 mm Hg. Chest pain improved, and neurologic status and distal pulses remained intact.

Cardiothoracic surgery specialists reviewed the imaging and confirmed acute Stanford type A involvement of the aortic arch and posterior ascending aorta without documented pericardial effusion or major branch-vessel malperfusion. Because specialized definitive aortic intervention was not available at the presenting hospital, the patient was transferred when hemodynamically stable to a tertiary cardiovascular center for definitive management.

Complete outside-hospital operative and discharge records from the receiving center were unavailable. The patient later recalled being told that his aorta had been repaired with a graft and believed that the procedure was performed through an arterial approach, but the exact repair technique could not be independently confirmed. He recalled temporary restrictions on heavy lifting but did not recall specific counseling

APPROVED GALLEY PROOF

This work is licensed under Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0)

Indexed in: [PMC] [PubMed] [Emerging Sources Citation Index (ESCI)] [Web of Science by Clarivate]

APPROVED GALLEY PROOF

Table 1. Published cases of aortic dissection temporally associated with masturbation.

Report	Relevant factors	Presentation / dissection	Management / outcome
McBeth and Rosenstein [6] 68-year-old man	Hypertension; coronary artery disease	Chest/back pain after masturbation; acute Stanford type A dissection	Transferred; died after arrival
Sanky and Sasi [7] 59-year-old man	Hypertension; renal insufficiency; IgG4-related disease; chronic steroids	Presyncope after masturbation; painless type A dissection	Aortic graft replacement
Escabi-Mendoza et al [8] 60-year-old man	Liddle syndrome with resistant hypertension; obstructive sleep apnea; chronic cannabis use	Chest pain during masturbation; cannabis within 1 hour; extensive type A dissection	Ascending/partial arch replacement; aortic valve repair
Present case 41-year-old man	Patient-reported prior hypertension without antihypertensive therapy; daily cannabis use; sertraline and olanzapine	Chest pain at orgasm; type A dissection extending from arch to right common iliac artery	Transferred; later, endograft visible on chest radiograph; exact procedure unavailable

regarding sexual activity. Five months later, during an emergency department visit for an unrelated reason, chest radiography objectively demonstrated interval placement of a thoracic aortic endograft without acute cardiopulmonary abnormality. The patient reported no postoperative complications and stated that he felt back to normal.

Discussion

Hypertension is a major predisposing factor for aortic dissection [1,2]. Follow-up history clarified that the patient had previously been told he had hypertension and had not been prescribed antihypertensive therapy before the event. Prior blood pressure values were unavailable, so the severity and chronicity of his pre-event hypertension could not be characterized. This history supports antecedent hypertension as a possible predisposing factor. However, the blood pressure of 195/102 mm Hg was measured after symptom onset and may have been amplified by severe pain and sympathetic activation; it cannot be used to reconstruct the patient's blood pressure immediately before the dissection.

The temporal relationship to orgasm is biologically plausible because sexual activity produces short-lived increases in cardiovascular workload [3,4]. However, competing factors must be considered. The patient used cannabis daily and reported smoking his usual amount several hours before symptom onset. Thoracic aortic dissection has been reported in temporal association with marijuana use in a case report [9], but this does not establish causation. Cannabis exposure therefore cannot be excluded as a contributing or confounding factor in this case. The positive opiate screen is also of uncertain significance because the patient denied prehospital opioid use, did not recall receiving opioids from emergency medical services, and the timing of any hospital-administered opioid relative to urine collection could not be verified. His psychiatric disorder was treated with regular sertraline and olanzapine, and he reported no stimulant medication use; the available data do not establish a causal role for these medications.

Sexual activity has been reported as a situational precipitant in acute aortic dissection, although the evidence is limited and must be interpreted in the context of underlying susceptibility. Gansera et al identified symptom onset during sexual intercourse in a subset of younger men with acute type A dissection [5]. Three published case reports describe dissection temporally associated with masturbation [6-8]. McBeth and Rosenstein reported a 68-year-old man with hypertension and coronary artery disease who developed acute type A dissection after masturbation and died shortly after transfer [6]. Sanky and Sasi described a 59-year-old man with hypertension, chronic renal insufficiency, and IgG4-related disease who developed a painless type A dissection after masturbation and underwent aortic graft replacement [7]. Escabi-Mendoza et al reported a 60-year-old man with resistant hypertension from Liddle syndrome and chronic cannabis use who developed extensive type A dissection after masturbation and recent cannabis exposure and underwent open aortic repair [8]. **Table 1** compares these reports with the present case.

The immediate onset of symptoms at orgasm makes orgasm the closest identifiable temporal event, but temporal proximity alone cannot establish that it was the primary cause. In this patient, patient-reported prior hypertension and daily cannabis exposure provide plausible predisposing or contributing factors. The most defensible interpretation is therefore that the dissection was multifactorial, with orgasm representing

This work is licensed under Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0)

Indexed in: [PMC] [PubMed] [Emerging Sources Citation Index (ESCI)] [Web of Science by Clarivate]

a possible immediate precipitating stressor rather than a proven cause.

The diagnosis was documented as acute by the presenting imaging interpretation and cardiothoracic assessment, and the abrupt onset of new symptoms supported an acute presentation. Nevertheless, prior imaging was unavailable and specific imaging features of chronicity were not independently available for review. An acute-on-chronic process cannot be completely excluded, and this limitation should be considered when interpreting the proposed temporal association.

The extent of the dissection, from the aortic arch to the right common iliac artery, was notable despite preserved major branch-vessel perfusion. The patient's hemodynamic stability permitted anti-impulse therapy and transfer to a tertiary cardiovascular center, but the available records do not establish that the absence of aortic root involvement itself made transfer possible or determined the definitive repair strategy. Later chest radiography documented a thoracic aortic endograft, while the exact procedure remains unknown because outside operative records were unavailable.

Clinicians should consider acute aortic syndrome when abrupt severe chest or back pain occurs during or immediately after sexual activity, especially when hypertension or other vascular risk factors are present. The clinical lesson is not that masturbation commonly causes dissection, but that the temporal context should not distract from prompt recognition of an acute aortic syndrome. Rapid computed tomography angiography, anti-impulse therapy, and transfer to an experienced aortic center remain central to management [2].

Conclusions

This case describes acute Stanford type A aortic dissection presenting with tearing chest pain at orgasm during masturbation. The timing supports a possible precipitating role for orgasm-related hemodynamic stress, but causality cannot be established. Patient-reported prior hypertension and recent cannabis exposure were possible predisposing or contributing factors, and the positive opiate screen could not be definitively explained from the available records. Clinicians should consider acute aortic syndrome when abrupt severe chest or back pain follows sexual activity, particularly in patients with additional vascular risk factors. Prompt imaging and anti-impulse stabilization remain essential.

Acknowledgements

We thank Aisha Tanveer, MD, for reviewing the structured abstract.

Department and Institution Where Work Was Done

Valley Health System Internal Medicine Residency Program and Spring Valley Hospital Medical Center, Las Vegas, NV, USA.

Patient Consent

Written informed consent for publication was obtained from the patient.

Declaration of Figures' Authenticity

All figures submitted have been created by the authors who confirm that the images are original with no duplication and have not been previously published in whole or in part.

References:

1. Hagan PG, Nienaber CA, Isselbacher EM, et al. The International Registry of Acute Aortic Dissection (IRAD): New insights into an old disease. JAMA. 2000;283(7):897-903
2. Isselbacher EM, Preventza O, Hamilton Black J 3rd, et al. 2022 ACC/AHA Guideline for the Diagnosis and Management of Aortic Disease: A Report of the American Heart Association/American College of Cardiology Joint Committee on Clinical Practice Guidelines. Circulation. 2022;146(24):e334-e482
3. Bohlen JG, Held JP, Sanderson MO, Patterson RP. Heart rate, rate-pressure product, and oxygen uptake during four sexual activities. Arch Intern Med. 1984;144(9):1745-48
4. Stein RA. Cardiovascular response to sexual activity. Am J Cardiol. 2000;86(2A):27F-29F
5. Gansera L, Deutsch O, Szameitat L, Eichinger W, Gansera B. Aortic dissections type A during sexual intercourse in male patients: Accident or systematic coincidence? Examination of 365 patients with acute aortic dissection within 20 years. Thorac Cardiovasc Surg. 2016;64(2):133-36
6. McBeth BD, Rosenstein DI. Acute aortic dissection with ST segment myocardial infarction following masturbation. J Emerg Med. 2020;58(4):e193-e96
7. Sanky C, Sasi N. Masturbation-induced presyncope: A case report of painless aortic dissection in immunoglobulin G4-related disease. Clin Exp Emerg Med. 2025;12(1):86-89
8. Escabi-Mendoza J, Diaz-Rodriguez PE, Gonzalez-Bravo DH, Partida-Rodriguez E. An unexpected cause of chest pain while self-pleasuring: a ripping doom excitement. Cureus. 2023;15(5):e38436
9. Mason EK, Gak AE, Finno JG, Cannon RD, Jacoby JL. Thoracic aortic dissection associated with marijuana use. J Emerg Med. 2019;57(2):235-37

APPROVED GALLEY PROOF

This work is licensed under Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0)

Indexed in: [PMC] [PubMed] [Emerging Sources Citation Index (ESCI)] [Web of Science by Clarivate]