

Abdominal aortic aneurysm – online methods of patient education

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Abstract

The authors present some of the most important online methods of patient education on diagnosis and treatment of abdominal aortic aneurysm (easy-to-read articles, medical journal with patient pages, patient guides, brochures, illustrations, animations, and frequently asked questions)

Key words: patient education, websites, abdominal aortic aneurysm, duplex ultrasonography

Rezumat

Autorii prezintă câteva dintre cele mai importante metode online de educație a pacienților referitoare la diagnosticul și la tratamentul anevrismului de aortă abdominală (articole, reviste medicale cu pagini ale pacientului, ghiduri pentru pacienți, broșuri, ilustrații, animații și întrebări frecvente).

Cuvinte cheie: educația pacientului, internet, anevrism de aortă abdominală, ultrasonografie duplex

Peripheral arterial disease is characterized by the existence of at least one lesion (stenosis, occlusion, and aneurysm) of the aorta, its abdominal branches and/or lower limb arteries. Abdominal aortic aneurysm (AAA) is defined by the anteroposterior diameter of the abdominal aorta of at least 3 cm [1].

The prevalence of AAA in men older than 65 years is between 5% and 10%. There is little information about the prevalence of AAA in women [2].

The leading cause of AAA is inflammation associated with atherosclerosis. The most important risk factors for AAA are the following: increasing age, male gender, family history of first-degree relatives, cigarette

smoking, hypertension, hypercholesterolemia, and obesity [1,3].

A lot of patients with AAA are asymptomatic. Some persons may present a pulsatile abdominal swelling and/or a persistent abdominal pain [4,5].

B-mode ultrasonography can identify the loss of aortic arterial wall parallelism and measure the anteroposterior diameter. This technique can diagnose some comorbidities (aneurysms in the popliteal, common femoral and common iliac arteries) and complications (plaques and intraluminal thrombosis) [6]. Plaque is defined by an intima-media thickness more than 1.3 or 1.5 mm or a focal increase of intima media thickness of 50% [7]. Unfortunately, ultrasound cannot define very well the extent of AAA. Other imaging techniques for identifying AAA are computed tomography scan and magnetic resonance imaging [8].

Natural history is characterized by the expansion in diameter and the mural thrombosis. Some fragments of thrombus may embolize distally. Rupture is the most important complication of AAA. It is characterized by a high mortality rate [1].

Ultrasound screening significantly reduces the mortality in men aged over 65 years [2]. Screening for AAA isn't cost

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effective [9]. Cost effectiveness seems to be more favourable after more than ten years of surveillance [10]. Rescreening of persons without aortic enlargement is not justified [10].

Non-surgical management of AAA comprises smoking cessation, lipid-lowering agents, antiplatelets agents, ultrasound surveillance every 6-12 month [1,4].

Elective surgical repair is recommended for aneurysms larger than 5.5 cm [2]. There are two surgical techniques with low perioperative mortality: traditional open repair and endovascular repair. The lowest perioperative mortality is associated with the endovascular repair [11].

The high frequency, the comorbidities and complications explain why, in Western countries, there are many patient education websites providing information about AAA. The online providers of patient education resources answer questions about many aspects of AAA – definition, causes, symptoms, diagnosis, natural history, and treatment (What is AAA?, What causes an AAA? Is there a family history of AAA? What are the symptoms? Is there a persistent abdominal pain or a pulsatile abdominal mass? What tests help in the diagnosis of AAA? How is AAA treated?) [4,8].

The most important and interesting practical aspects of AAA ultrasound diagnosis are also presented, in many cases, as easy-to-understand questions and answers. This information is useful to general population and patients referred to the vascular laboratory [4,8,12,13]:

- What is the preparation for the test?
- Who will perform the exam?
- What will happen during the test?
- How long does the examination take?
- Is this exam safe?
- Is this method noninvasive?
- What is the screening procedure?

There are many examples of online resources of patient education. These resources may be classified as follows:

- Easy-to-read articles
- Medical journals with „Patient Pages”
- Patient guides
- Brochures, booklets and pamphlets
- Fliers and briefings
- Fact Sheets
- Leaflets
- Frequently asked questions (FAQs)
- Informations about screening
- Illustrations
- Animations
- Video presentations
- Podcasts
- Online health chats
- Patient stories
- Tutorials
- Joining a clinical trial

Easy-to-read articles

- http://en.wikipedia.org/wiki/Abdominal_aortic_aneurysm
- <http://heartdisease.about.com/cs/aorticaneurysm>
- <http://www.abilenecardiology.com> Cardiology Consultants, Abilene Heart & Vascular Institute, Abilene, TX > Resources > Tests & Procedures > Renal and Abdominal Scans
- www.californiaheartclinic.com California Heart & Vascular Clinic San Diego, CA > For Patients > Patient Education Library > Conditions > Abdominal Aortic Aneurysm
- www.clevelandclinic.org The Cleveland Clinic, Ohio > Diseases & Conditions > A > Abdominal Aortic Aneurysm or www.clevelandclinic.org > Institutes & Services > Miller Family Heart & Vascular Health > Find Heart & Vascular Health Information > By All Topics (A – Z) > A > Abdominal Aortic Aneurysm
- www.dukeheartcenter.org Duke Medical Center, NC > Patient Education > Patient Education Library > Conditions > Abdominal Aortic Aneurysm
- www.gvg.org.uk Gloucestershire Vascular Group > Patient Information Pages > Aortic Aneurysms
- www.legacyheartcenter.com Legacy Heart Center, Plano, TX > Tests & Procedures > Sonograms > Aorta
- www.mayoclinic.com > Diseases and Conditions > A > Aortic aneurysm > Tests and diagnosis > Abdominal ultrasound
- www.medicinenet.com > Diseases & Conditions > A > Aa – Ae > AAA (Abdominal Aortic Aneurysm) > What tests help in the diagnosis of an abdominal aortic aneurysm?
- www.medicinenet.com > Doctor-to-Patient & Patient-to-Patient Stories > Article Listing > A > Abdominal Pain
- www.medicinenet.com > Procedures & Tests > Procedures & Tests A-Z List > U > Ultrasound > Screening uses; Diagnosis uses
- www.nlm.nih.gov/medlineplus Medline Plus (A service of the U.S. national Library of Medicine and the national Institutes of Health) > Health Topics > A > Aortic Aneurysm (Mayo Foundation for Medical Education and Research)
- www.theheartcenter.net > For Patients > Patient Education > Conditions > Abdominal Aortic Aneurysm
- www.ucsfhealth.org > Health Library > Conditions > A > Aneurysms
- www.ucsfhealth.org University of California San Francisco (UCSF) Medical Center, CA > Health Library > Medical Tests > A > Abdominal Ultrasound

- www.uptodate.com > For Patients > Search > Abdominal aortic aneurysm > Patient information: Abdominal aortic aneurysm > Abdominal aortic aneurysm risk factors
- www.urmc.rochester.edu University of Rochester Medical Center > Patient Care > Health Information > Health Encyclopedia > Info Extras > Tests & Procedures > Abdominal Aortic Aneurysm Repair
- www.urmc.rochester.edu > Patient Care > Health Information > Health Encyclopedia > Conditions index > A > Abdominal Aortic Aneurysm
- www.vascularweb.org Society for Vascular Surgery > Patients and Families > Patient Information (Information on Vascular Conditions, Tests, and Treatments) > Search for Information > Abdominal Aortic Aneurysm

Medical journals with „Patient Pages”

- www.circ.ahajournals.org Circulation > Circulation Archives > Browse by Special Section > Special Sections > Cardiology Patient Page: O’Gara PT. Aortic Aneurysm, *Circulation* 2003; 107: e43 – e45;

Patient guides

- www.abdominalaneurysm-info.com Medifocus Digest Alert. The Medifocus Guidebook on Abdominal Aortic Aneurysm „Abdominal Aortic Aneurysm. A comprehensive guide to symptoms, treatment, research, and support”

Brochures, booklets and pamphlets

- www.azheart.com Arizona Heart Institute Phoenix, AZ > Select a Brochure > Aneurysms
- www.goremedical.com WL Gore & Associates Inc. Medical Product Division > Aortic Aneurysm > Patient Information > Patient Information for Aortic Aneurysm (March 2006)
- www.svunet.org Society for Vascular Ultrasound > Publications & Products > Patient Education Guidelines > Abdominal Vascular Arterial Disease

Fliers and briefings

- www.vascularweb.org > Patients and Families > Patient Education Fliers & Vascular Health Briefings > Abdominal Aortic Aneurysm (AAA) > Diagnosis
- www.vascularweb.org > Patients and Families > Patient Education Fliers & Vascular Health Briefings > AAA Screening Medicare Benefit > What is the screening procedure?
- <http://healthlibrary.brighamandwomens.org> Brigham and Women’s Hospital Boston, MA. A Teaching Affiliate of Harvard Medical School > Condition Search > A > Aneurysm > How are aneurysms diagnosed? > Ultrasound

Fact Sheets

- www.med.nyu.edu New York University Langone Medical Center > Diseases & Conditions Information > A – Z Health Article Search > A > Aortic aneurysm; Aneurysm, aortic

Leaflets

- www.patient.co.uk > Information Leaflets > Heart/ Blood Vessels > Aortic Aneurysm (Abdominal)

Frequently asked questions (FAQs)

- www.about.com > Health > Heart Health > Heart Disease > Heart Surgery, congenital problems, and more > Aortic Aneurysm > Abdominal Aortic Aneurysm – FAQ
- www.vascularweb.org > Patients and Families > AAA Screening Medicare Benefit. Downloadable Flier > Frequently Asked Questions. Learn about AAA Screening Medicare Benefit

Informations about screening

- www.geneseevascularlab.com Genesee Vascular Lab, Inc. Rochester, NY (company providing preventive health screenings) > Diagnostic Exams > Abdominal Duplex > Abdominal Arterial Duplex Scan
- www.gvg.org.uk > The Gloucestershire Aneurysm Screening Programme
- www.vascularweb.org > Patients and Families > Vascular Screenings > AAA Screening Medicare Benefit; U.S.Hockey Gold Medalist, Jim Craig, on AAA Screening

Illustrations

- <http://healthlibrary.brighamandwomens.org> > Condition Search > A > Aneurysm
- www.cookmedical.com Cook Group Medical Manufacturing Comp. > Patients > Patient Education > Abdominal Aortic Aneurysm (AAA) > Patient Guide. Treating Your Abdominal Aortic Aneurysm
- www.gvg.org.uk/pics.htm Gloucestershire Vascular Group CT scan of abdominal aortic aneurysm; Simplified diagram of an aortic aneurysm; Photograph of PM specimen of aortic aneurysm
- www.mayoclinic.com > Diseases and Conditions > A > Aortic aneurysm > Tests and diagnosis >

Ultrasound of aortic aneurysm

- www.vascularweb.org > Patients and Families > AAA Screening Medicare Benefit. Downloadable Flier > Frequently Asked Questions. Learn about AAA Screening Medicare Benefit

Animations

- www.goremedical.com GORE EXCLUDER® AAA Endoprosthesis Treatment Option for an Abdominal Aortic Aneurysm (2007)

- www.urmc.rochester.edu > Patient Care > Health Information > Health Encyclopedia > Info Extras > Animation > Animation list > Aneurysm
- Video presentations
- www.goremedical.com > Aortic Aneurysm > Patient Information > Video > AAA Patient Education (Abdominal Aortic Aneurysm)
- www.nlm.nih.gov/medlineplus > Surgery Videos > Blood, Heart, and Circulation > Aortic Aneurysm. Endovascular Abdominal Aortic Aneurysm Repair (Texas Heart Institute at St.Luke's Episcopal Hospital, Houston, TX 12/05/2007)

Podcasts

- www.clevelandclinic.org The Cleveland Clinic, Ohio > Institutes & Services > Heart & Vascular Health (Miller Family) > Find Heart & Vascular Health Information > Resources & Tools > Heart Podcasts > Aorta – Great Vessel Disease > Questions and Answers about Aortic Aneurysm and Aortic Surgery with cardiothoracic surgeon Lars Svensson, MD, PhD (December 6, 2006)
- www.vascularweb.org > Patients and Families > Vascular Health Podcasts > Abdominal Aortic Aneurysm (AAA)

Online health chats

- www.clevelandclinic.org > Videos, Webcasts & Podcasts > Future Chats > Date: 01.19.2009; Topic: Abdominal Aortic Aneurysm; Speaker: Matthew Eagleton, MD

Patient stories

- www.medicinenet.com > Diseases & Conditions > A > Aa – Ae > AAA (Abdominal Aortic Aneurysm) > Patient Discussions: Abdominal Aortic Aneurysm – Describe Your Experience

Tutorials

- www.nlm.nih.gov/medlineplus > Interactive Tutorials > Diseases and Conditions > Abdominal Aortic Aneurysm

Joining a clinical trial

- www.clinicaltrials.gov > Endovascular Exclusion of Abdominal Aortic Aneurysms in High Risk Patients. Sponsor: The Cleveland Clinic. Identifier: NCT 00583414; Zenith® Loe Profile AAA Endovascular Graft Clinic Study. Sponsor: Cook. Identifier: NCT 00833924

In conclusion, the final objective of these online methods of patient education is to increase patient compliance with AAA treatment.

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5. http://www.wrongdiagnosis.com/sym/pulsatile_abdominal_swelling.htm (website accessed on December 6, 2009)
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