

Name of Journal: *World Journal of Cardiology*

ESPS Manuscript NO: 28690

Manuscript Type: Case Report

Conservative management of aortic root rupture complicated with <sup>9</sup>cardiac tamponade following transcatheter aortic valve implantation

Luca Vannini, Rut Andrea, Manel Sabaté

#### Abstract

Aortic root rupture and cardiac tamponade during transcatheter aortic valve implantation is a frightening complication with high mortality rate. A conservative management of this complication could represent an initial strategy, especially in high-risk patients, to avoid emergent cardiac surgery. This conservative management includes: immediate detection of pericardial effusion by echocardiography, a fast instauration of pericardial drainage, auto-transfusion and anticoagulation reversal. We describe two cases of patients who suffered this complication and were treated successfully with this initial approach.

<sup>6</sup>**Key words:** Aortic valve stenosis; Catheters; Heart valve prosthesis; Prosthesis implantation; Cardiac tamponade

**Core tip:** Aortic root rupture during TAVI is a rare but severe complication with high mortality rate. We described two cases of aortic root rupture where

#### Match Overview

1	<b>Crossref</b> 20 words Vinali, M., F. F. Faletra, J. Ternacle, P. Mortier, and P. P. T... e Jaegere. "Imaging in the Transcatheter Aortic Valve Era",	1%
2	<b>Internet</b> 16 words crawled on 08-May-2016 arsiv.tkd.org.tr	1%
3	<b>Crossref</b> 16 words Mouillet, Gauthier, Nicolas Lellouche, Masanori Yamamoto, Atsushi Oguri, Jean-Luc Dubois-Rande, Eric Van Belle, Ma	1%
4	<b>Crossref</b> 13 words Stangl, Karl, Verena Stangl, and Michael Laule. "Transfemoral Pulmonary Valve Implantation for Severe Pulmonary H...	1%
5	<b>Crossref</b> 11 words Maurizio Taramasso. "Transcatheter aortic valve implanta... on through the left subclavian artery with a patent LIMA graf	1%
6	<b>Crossref</b> 11 words Lee, Yong-Joon, Young-Ju Kim, Jung-Hee Lee, Young-Guk Ko, Sanghoon Shin, Geuru Hong, Sak Lee, Byung-Chul Ch	1%
7	<b>Publications</b> 9 words "Researchers from University of Padua Describe Findings... n Cardiovascular Research.", Cardiovascular Week, Oct 24	<1%
8	<b>Internet</b> 9 words crawled on 23-Jan-2015 drughealth.org	<1%
9	<b>Crossref</b> 6 words Wang, Qian, Susheel Kodali, Charles Primiano, and Wei S un. "Simulations of transcatheter aortic valve implantation...	<1%

[全部](#)[图片](#)[视频](#)[新闻](#)[更多 ▾](#)[搜索工具](#)

找到约 29,100 条结果 (用时 0.85 秒)

### Transcatheter aortic valve implantation complicated by acute ... - NCBI

[www.ncbi.nlm.nih.gov](http://www.ncbi.nlm.nih.gov) > [NCBI](#) > [Literature](#) > [PubMed Central \(PMC\)](#) ▾ [翻译此页](#)

作者: O Možeńska - 2014 - [相关文章](#)

2014年3月23日 - [Transcatheter aortic valve replacement](#) (TAVR) is now an accepted standard of ... Despite its more widespread adoption as a [treatment](#) option and ... We therefore report a case of TAVR [complicated](#) by acute [pericardial tamponade](#), one ... and [aortic root rupture/perforation/dissection](#), occurring either during ...

缺少字词: conservative

### Echocardiographic Imaging of Procedural Complications During ...

[www.ncbi.nlm.nih.gov](http://www.ncbi.nlm.nih.gov) > [NCBI](#) > [Literature](#) > [PubMed Central \(PMC\)](#) - [翻译此页](#)

[Transcatheter aortic valve replacement](#) (TAVR) using a balloon-expandable valve is an ... the [aortic](#) valvular [complex](#) before transcatheter [heart](#) valve (THV) implantation (7–18). .... [aortic](#) pathology, coronary patency, biventricular function, [root rupture](#), and .... [Conservative management](#) of the periaortic hematoma (including ...

### Complications at the Time of Transcatheter Aortic Valve Implantation

[www.ncbi.nlm.nih.gov](http://www.ncbi.nlm.nih.gov) > [NCBI](#) > [Literature](#) > [PubMed Central \(PMC\)](#) ▾ [翻译此页](#)

作者: JC Laborde - 2012 - [被引用次数: 13](#) - [相关文章](#)

[Transcatheter aortic valve implantation](#) (TAVI) improves the prognosis of patients with ... prerequisites before the [therapy](#) is extended to lower-risk patient subsets. ... as vascular access complications and [cardiac](#) perforation/[tamponade](#) seen with also .... [Aortic root rupture](#) may occur [after](#) balloon valvuloplasty or [after](#) valve ...

### Annular Rupture During Transcatheter Aortic Valve Replacement ...

[interventions.onlinejacc.org/article.aspx?articleid=2091404](http://interventions.onlinejacc.org/article.aspx?articleid=2091404) ▾ [翻译此页](#)

作者: M Pasic - 2015 - [被引用次数: 13](#) - [相关文章](#)

The type of therapy depends on the location of the annular [rupture](#) and the nature of the ... [cardiac](#) procedure, isolated [pericardial](#) drainage, and [conservative](#) therapy. ... [Transcatheter aortic valve replacement](#) (TAVR) or transcatheter aortic valve ... Injury of the [aortic root](#) or LVOT may occur during

找到约 29,600 条结果 (用时 1.02 秒)

### Transcatheter aortic valve implantation complicated by acute ... - NCBI

<https://www.ncbi.nlm.nih.gov> › NCBI › Literature › PubMed Central (PMC) - 翻译此页

作者: O Možeńska - 2014 - 相关文章

2014年3月23日 - **Transcatheter aortic valve replacement (TAVR)** is now an accepted standard of ... We therefore report a case of TAVR **complicated** by acute **pericardial tamponade**, one of the ... Aortic ring **rupture** or **aortic root rupture** was suspected. ... **After** rather straightforward repair of perforation of the LV lateral wall the ...

缺少字词: conservative

### Complications at the Time of Transcatheter Aortic Valve Implantation

<https://www.ncbi.nlm.nih.gov> › NCBI › Literature › PubMed Central (PMC) - 翻译此页

作者: JC Laborde - 2012 - 被引用次数: 15 - 相关文章

**Transcatheter aortic valve implantation (TAVI)** improves the prognosis of patients with ... prerequisites before the **therapy** is extended to lower-risk patient subsets. ... as vascular access complications and **cardiac perforation/tamponade** seen with also .... **Aortic root rupture** may occur **after** balloon valvuloplasty or **after** valve ...

### Echocardiographic Imaging of Procedural Complications During ...

[www.ncbi.nlm.nih.gov](http://www.ncbi.nlm.nih.gov) › Journal List › HHS Author Manuscripts - 翻译此页

**Transcatheter aortic valve replacement (TAVR)** using a balloon-expandable valve is ... the **aortic** valvular **complex** before transcatheter **heart** valve (THV) implantation (7–18). .... **Rupture** of the balloon during BAV is typically caused by spicules of calcium. .... **Conservative management** of the periaortic hematoma (including ...

### Acquired Aseptic Intracardiac Shunts Following Transcatheter Aortic ...

[interventions.onlinejacc.org/article.aspx?articleid=2588647](http://interventions.onlinejacc.org/article.aspx?articleid=2588647) ▼ 翻译此页

Background AICS **following transcatheter aortic valve replacement (TAVR)** are an ... such as annular **rupture** (6), coronary obstruction (7), **cardiac tamponade** (8), ..... shunts (6 patients), with 1 being **complicated** by **aortic root-to-right ventricle fistula**. ..... The present analysis indicates that **conservative management** seems ...

[全部](#)[图片](#)[新闻](#)[视频](#)[更多](#)[设置](#)[工具](#)

找到约 29,100 条结果 (用时 0.77 秒)

### Transcatheter aortic valve implantation complicated by acute ... - NCBI

<https://www.ncbi.nlm.nih.gov> > NCBI > Literature > PubMed Central (PMC) - [翻译此页](#)

作者: O Možeńska - 2014 - [相关文章](#)

2014年3月23日 - **Transcatheter aortic valve replacement** (TAVR) is now an accepted standard of ... We therefore report a case of TAVR **complicated** by acute **pericardial tamponade**, one of the ... Aortic ring **rupture** or **aortic root rupture** was suspected. ... **After** rather straightforward repair of perforation of the LV lateral wall the ...

缺少字词: conservative

### Complications at the Time of Transcatheter Aortic Valve Implantation

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3405794/> - [翻译此页](#)

作者: JC Laborde - 2012 - 被引用次数: 15 - [相关文章](#)

**Transcatheter aortic valve implantation** (TAVI) improves the prognosis of patients with ... prerequisites before the **therapy** is extended to lower-risk patient subsets. ... as vascular access complications and **cardiac perforation/tamponade** seen with also .... **Aortic root rupture** may occur **after** balloon valvuloplasty or **after** valve ...

### Echocardiographic Imaging of Procedural Complications During ...

[www.ncbi.nlm.nih.gov](http://www.ncbi.nlm.nih.gov) > NCBI > Literature > PubMed Central (PMC) - [翻译此页](#)

2016年3月1日 - **Transcatheter aortic valve replacement** (TAVR) using a ... for assessing the **aortic** valvular **complex** before transcatheter **heart valve** (THV) implantation (7–18). .... If **rupture** of the balloon occurs during deployment of the THV, the valve may .... **Conservative management** of the periaortic hematoma (including ...

### Acquired Aseptic Intracardiac Shunts Following Transcatheter Aortic ...

[interventions.onlinejacc.org/mobile/article.aspx?articleid=2588647](http://interventions.onlinejacc.org/mobile/article.aspx?articleid=2588647) - [翻译此页](#)

2016年11月23日 - Background AICS following **transcatheter aortic valve replacement** (TAVR) are ...