



# Fever Following TAVI: Prevalence, Pattern and Rate Attributed to an Infectious Origin

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# Conflict of interest

- Dr. Ariel Finkelstein - consultation fees from Medtronic Cardiovascular and Edwards Lifesciences.
- All other authors declare having no potential conflict of interest.

# Introduction

- Fever following TAVI is common and may result in extensive workup, treatment with broad-spectrum antibiotics and prolonged hospitalization.
- Objective: To assess the prevalence and nature of fever following TAVI, and analyze whether cases of fever were attributed to infection.

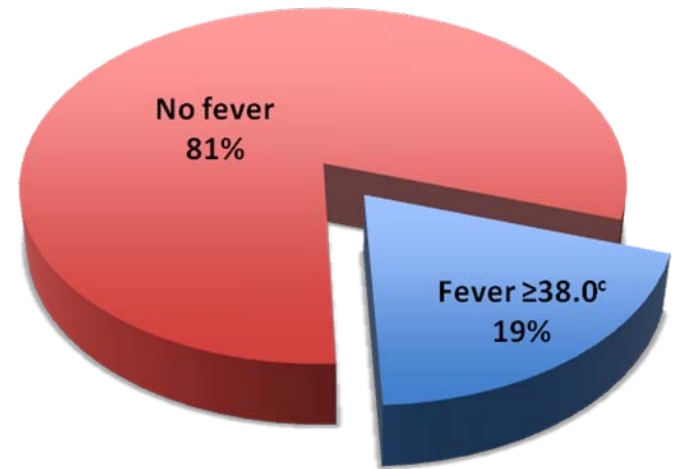
# Methods

- An observational retrospective study of the first 140 consecutive patients undergoing TAVI.
- All received peri-procedural antibiotic prophylaxis with a 1st or 2nd generation cephalosporin (or vancomycin if penicillin allergic).
- Measurements of fever (above  $\geq 38.0^{\circ}\text{C}$ ) within the first week following TAVI were collected, differentiating between patients with a single fever measurement and those with a prolonged episode.

# Results

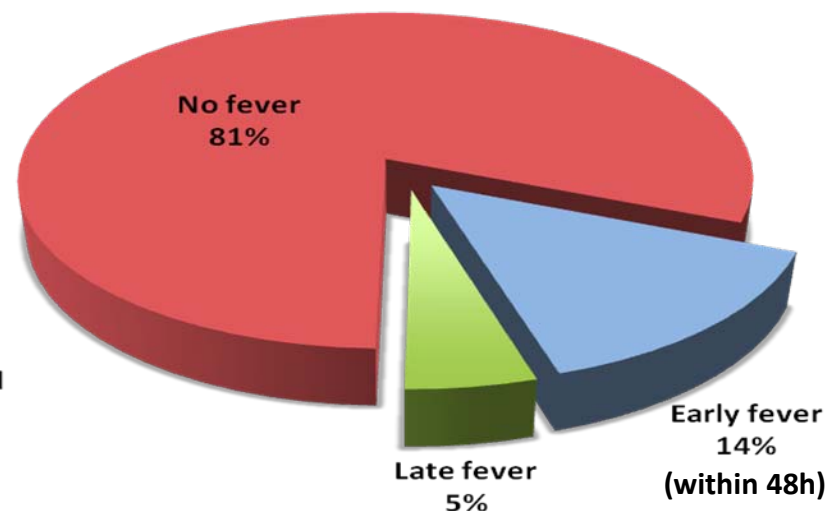
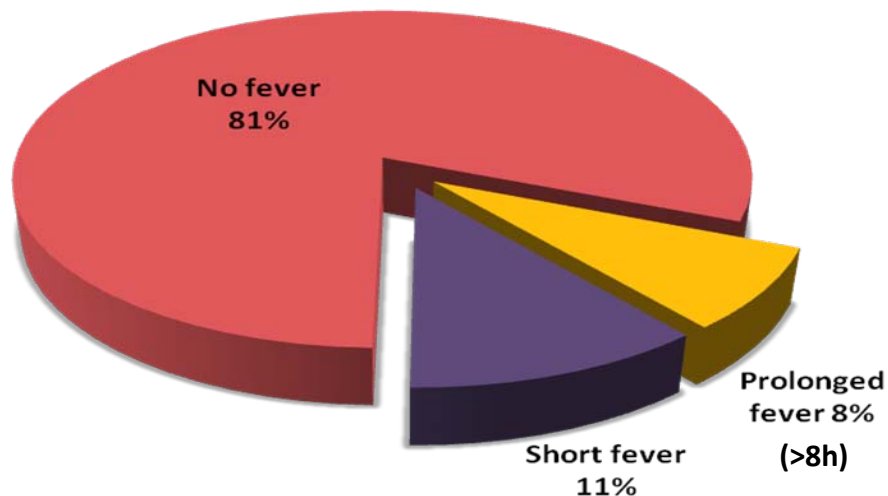
## Prevalence:

Fever above  $\geq 38.0^{\circ}\text{C}$  occurred in 27 patients (19.4%) within 7 days following TAVI.

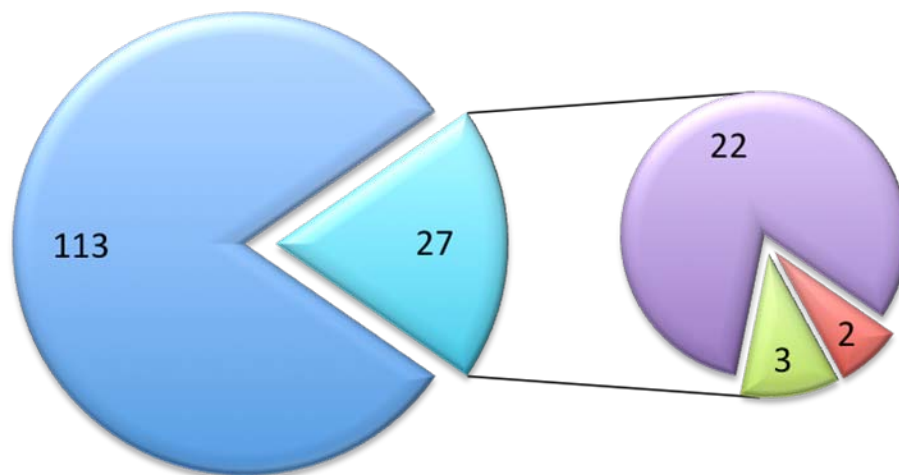


## Pattern:

11 patients had  $>1$  fever spikes and fever lasting  $>8$  hours.



# Results



■ No fever  
 ■ Fever & BSI  
 ■ Fever & UTI  
 ■ Fever - No infection

	Clinical syndrome	Isolated pathogen	Onset of fever	Duration of fever	Temp.
Patient 1	UTI	<i>E. cloacae</i> - Cephalosporin R	>48h	<8h	<38.5
Patient 2	BSI	<i>E. faecalis</i>	>48h	>8h	>38.5
Patient 3	UTI	<i>K. pneumoniae</i> - Cephalosporin S	<48h	>8h	<38.5
Patient 4	UTI	<i>E. cloacae</i> , <i>C. freundii</i> -Cephalosporin R	>48h	<8h	<38.5
Patient 5	UTI + BSI	<i>K. pneumoniae</i> - ESBL	<48h	>8h	>38.5

# Results

- Immediate post-procedural stroke and tamponade were significantly associated with fever.
- Post TAVI Fever was not associated with increased 30 days mortality or combined outcome score (VARC).
- On the other Hand:  
**Prolonged fever** (>one spike and lasting >8 hours) was significantly associated with:
  - Increased 30 days mortality: **OR 7.55** (95% CI 2.4-24.2)
  - Prolonged hospitalization: 14.3d vs. 7.3d (p=0.04)

# Conclusions

- A significant rate of TAVI patients develop fever, often triggering the initiation of wide spectrum antibiotic treatment.
- Only a minority of patients have a documented infectious complication. In others, post TAVI fever probably represents a non-infectious inflammatory response.
- A short febrile episode was not related to increased mortality. In these patients who are otherwise clinically stable, antibiotic therapy may be deferred.
- Prolonged fever is associated with increased 30d mortality and should raise suspicion of a significant infection requiring empirical antibiotics.



# Thank you

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