

## Objectives

Ghent University Hospital is a tertiary care teaching hospital with 1062 beds. Since January 2011, a multidisciplinary Infection Team (MIT) was established for daily follow-up of complex non-ICU infections. The team is composed of an infectiologist, clinical pharmacist and clinical microbiologist. One of the aims of the MIT is to contribute to a correct management of blood stream infections, including *S. aureus* (SA) bacteremias (SAB).

## Methods

All positive blood cultures growing SA are discussed on a daily basis in the MIT. For each patient, an oral or written advice is given on:

- duration and dosing of antibiotic therapy (IV and during  $\geq 10$  days)
- the appropriateness and timing of a transthoracic (TTE) or transoesophageal (TEE) echocardiography 10-14 days following the positive culture
- the removal of the central venous catheter within the first 10 days

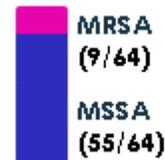
These three elements are used as quality indicators, as developed by the ABS Quality Improvement project.

For an echocardiography to be performed, the following risk factors are evaluated (*Kaasch et al, CID 2011*):

- positive blood cultures during  $>4$  days
- a permanent intracardial device
- spondylodiscitis
- non-vertebral osteomyelitis
- valvular pathology
- hemodialysis

The MIT reassesses every case on a weekly basis and repeats or adjusts the advice when necessary.

Patients  $<18$  years, in palliative settings and/or patients who died within 5 days after the first positive blood culture were excluded from this analysis.



## Results

From 1/1/2013 until 1/11/2013, 64 SAB episodes occurred in the adult population. In 9 cases the causative organism was methicillin resistant (MRSA). Six patients were excluded from the analysis as described in the methods section.

For the three quality indicators, the results were as follows:

1. Appropriate IV antibiotic correctly given during at least 10 days: **43/58** episodes

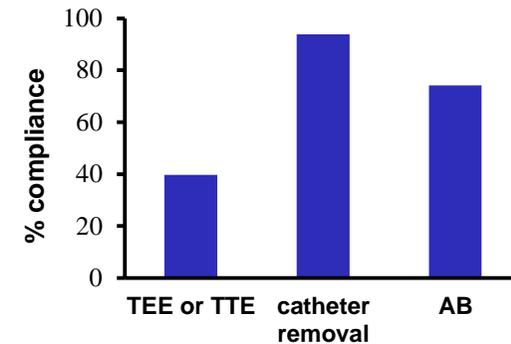
2. Timely removal of central venous catheter: **30/32**

→ Reasons for non-removal: thrombopenia and precociousness (no means of replacement). In 15 cases no catheter was present at SAB onset. In 11 patients there were missing data.

3. Echocardiography performed: **49/58**

Echocardiography performed 10 to 14 days after the SAB onset: 23/49. In 17/35 cases, the echocardiography was performed too early, although in only a few cases, an underlying medical condition could warrant the early echocardiography.

In the subpopulation of patients presenting at least one of the six endocarditis risk factors, echocardiography at 10-14 days after SAB onset was only performed in 9 of 20 patients.



**Conclusion:** A Multidisciplinary Infection Team (MIT) for active follow-up of SAB episodes can play an important role to improve the compliance to treatment guidelines. Additional efforts should be made to improve compliance to perform echocardiography within the defined time frame, especially in patients with endocarditis risk factors.