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Introduction
Intra-abdominal infection

- **Source of considerable morbidity/mortality**
- **Complex disease entity**
  - Broad spectrum of type of infections/disease severity
  - Detrimental role of surgery
  - Broad variety of potential pathogens
  - Equivocal sense of culture results
- **Emergence of MDR = concern**
  - Impact of "classic risk factors" less clear
  - When to cover potentially MDR pathogens?

Introduction
Intra-abdominal infection

- **Troublesome classification**
  - Peritonitis: primary, secondary, tertiary
  - Intra-abdominal infection

➔ **difficult to describe the epidemiology**

Towards a new classification for intra-abdominal infections?

- **Proposal of an alternative approach to classify IAI**
  - Severity of disease expression
    - Mild (sepsis)
    - Moderate (severe sepsis)
    - Severe (septic shock)
  - Anatomical disruption
    - Without perforation
    - Localized peritonitis
    - Diffuse
  - Infection onset
    - Community-acq. or early-onset HCA
    - Late-onset HCA and/or recent antimicrob. exposure

Blot S, et al. Drugs 2012

Towards a new classification for intra-abdominal infections?

	Disease expression		
	Mild (sepsis)	Moderate (severe sepsis)	Severe (septic shock)
Community-acquired or early-onset healthcare-associated IAI (<7 days after hospital admission)			
Without perforation	1	1	2
Localized peritonitis	1	1	2
Diffuse peritonitis	1	2	2
Late-onset healthcare-associated IAI (≥7 days after hospital admission) and/or recent antimicrobial exposure			
Without perforation	2	2	2
Localized peritonitis	2	2	3
Diffuse peritonitis	2	3	3

IAI = intra-abdominal infection.

Blot S, et al. Drugs 2012

Study objective

- **Describe the epidemiology** of **abdominal sepsis** according to the **new classification system for IAI**
  - Microbial epidemiology
    - Geographical region
    - Source of IAI
    - Origin
  - Antimicrobial prescription patterns
  - Outcomes

Study objective

- **Describe the epidemiology** of **abdominal sepsis** according to the **new classification system for IAI**
  - Microbial epidemiology
  - Antimicrobial prescription patterns
    - According to new classification
  - Outcomes

Study objective

- **Describe the epidemiology** of **abdominal sepsis** according to the **new classification system for IAI**
  - Microbial epidemiology
  - Antimicrobial prescription patterns
  - Outcomes
    - Clinical response
    - Need for surgical revision
    - LOS
    - Mortality (at 28 days)

Patient Selection & Inclusion Criteria

- **Patient selection**
  - all consecutive
  - adult ICU patients
  - diagnosed with IAI
    - either as a primary diagnosis or as a
    - complication during the ICU course
  - during a 12 months period (Jan - Dec. 2016)
  - Max. 15 cases per centre.

Patient Selection & Inclusion Criteria

- **Inclusion criteria**
  - Adult (≥18 yrs. of age)
  - ICU admission
  - One of the following
    - ❑ Primary peritonitis
    - ❑ Secondary peritonitis
    - ❑ Tertiary peritonitis
    - ❑ PD-related peritonitis
    - ❑ Intra-abdominal abscess
    - ❑ Biliary tract infection
    - ❑ Pancreatic infection
    - ❑ Typhlitis
    - ❑ Toxic megacolon

What's in the CRF?

- ICU properties
- Patient data
  - Demographics (incl. risk factors for MDR)
  - Data to validate the new classification system
  - SAPS II
  - SOFA (at diagnosis, 24 & 72 hrs.)
  - Microbiology (>peri-operative culture)
  - Anti-infective therapy (antimicrobials, source control, adjunctive R/)
  - Outcomes (surg. re-intervention, ICU LOS, organ support, 28-day survival

Study size

- Target:
  - ICUs: 150
  - Patients: n=1550
- Study power
  - Prevalence of risk factor = 15%
  - Outcome difference (with vs. without risk factor): 10% (35 vs. 45%)
  - Alpha = 0.05 & Beta = 0.80
  - Required sample size: 1500 patients

Selected
ESICM Trials Group Study

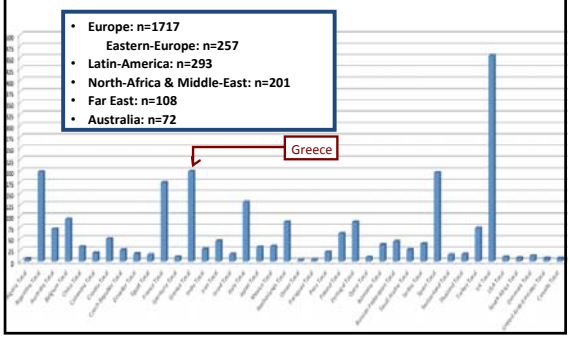
- Strongly promoted through extensive network
- Development study webpage: www.esicm.org/research/abses
- e-CRF

- 2015: worldwide promotion
- 2016: inclusion period
- 31 March 2017: data entry closed

What's in the database…?

- Initial database: n=2805 (from 319 ICUs)
- After first check: n=2625

Inclusion per country



What's in the database…?

- Initial database: n=2805 (from 319 ICUs)
- After first check: n=2625
- **Primary objective**: validate a new classification system for intra-abdominal infections
  - o Origin of infection
  - o Anatomical disruption
  - o Severity of disease expression
  - o 28-day survival

    ➔ data available: n=2387 - mortality: n=681 (28%)
- Peri-operative cultures: n=1301

Current status

- **Data cleaning**
- **Presentation of initial analyses: March 2018 (?)**

Thank you

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