

SWARM ICU

Early onset pneumonia post cardiac arrest in the era
of normothermia

The Project

- A prospective observation study to define the incidence of EOP in a UK cohort
- Assess the uptake of certain ICU management options

The Team

Site 0

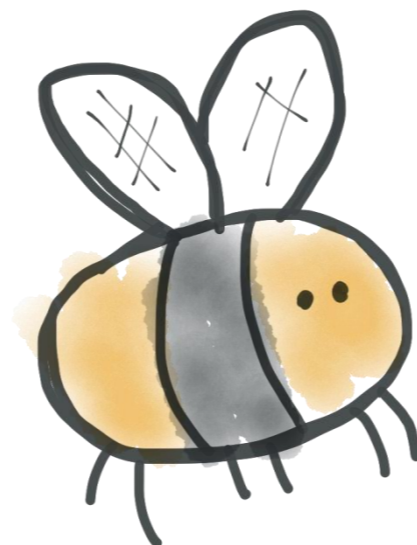
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Saibal Ganguly

The Reason

Early-Onset Pneumonia after Cardiac Arrest Characteristics, Risk Factors and Influence on Prognosis

Sébastien Perbet^{1,2}, Nicolas Mongardon^{1,5}, Florence Dumas^{3,9}, Cédric Bruel^{2,8}, Virginie Lemiale¹, Bruno Mourvillier², Pierre Carli^{4,5}, Olivier Varenne^{5,6}, Jean-Paul Mira^{1,5,7}, Michel Wolff^{2,8}, and Alain Cariou^{1,5,9}

ORIGINAL ARTICLE

Targeted Temperature Management at 33°C versus 36°C after Cardiac Arrest

Niklas Nielsen, M.D., Ph.D., Jørn Wetterslev, M.D., Ph.D., Tobias Cronberg, M.D., Ph.D., David Erlinge, M.D., Ph.D., Yvan Gasche, M.D., Christian Hassager, M.D., D.M.Sci., Janneke Horn, M.D., Ph.D., Jan Hovdenes, M.D., Ph.D.,

Circulation
Cardiovascular Interventions
JOURNAL OF THE AMERICAN HEART ASSOCIATION

American Heart Association
Learn and Live

Immediate Percutaneous Coronary Intervention Is Associated With Better Survival After Out-of-Hospital Cardiac Arrest : Insights From the PROCAT (Parisian Region Out of Hospital Cardiac Arrest) Registry
Florence Dumas, Alain Cariou, Stéphane Manzo-Silberman, David Grimaldi, Benoît

Research

Original Investigation | CARING FOR THE CRITICALLY ILL PATIENT

Vasopressin, Steroids, and Epinephrine and Neurologically Favorable Survival After In-Hospital Cardiac Arrest A Randomized Clinical Trial

Spyros D. Mentzelopoulos, MD, PhD; Sotirios Malachias, MD; Christos Chamos, MD; Demetrios Konstantopoulos, MD; Theodora Ntaidou, MD; Androula Papastylanou, MD, PhD; Iosifinia Kolliantzaki, MD; Maria Theodoridi, MD; Helen Ischaki, MD, PhD; Demosthenes Makris, MD, PhD; Epaminondas Zakynthinos, MD, PhD; Elias Zintzaras, MD, PhD; Sotirios Sourlas, MD; Stavros Aloizos, MD; Spyros G. Zakynthinos, MD, PhD

Methods

- All patient admitted post cardiac arrest
- 6 trusts of our network
- Period of 6 months
- Approved by R+D / audit

Methods

Developed an EOP: YES NO (COMPLETE CRITERIA)

| | |
|---|--|
| Criteria (within 72hrs of admission) | |
| Clinical findings OR CXR changes | |

AND

OR

| Criteria | Quantitative | | | Criteria | |
|------------------|--|----------|-------|--|--|
| Positive culture | Aspirate (10^6 cfu/ml) | | | Purulent aspirates | |
| | BAL (10^4 cfu/ml) | | | FiO ₂ /PaO ₂ < 32kPa | |
| | Blind protected specimen (10^3 cfu/ml) | | | | |
| Flora isolated | | | | | |
| | Qualitative | | | | |
| Growth | Minimal | Moderate | Heavy | | |
| Flora isolated | | | | | |

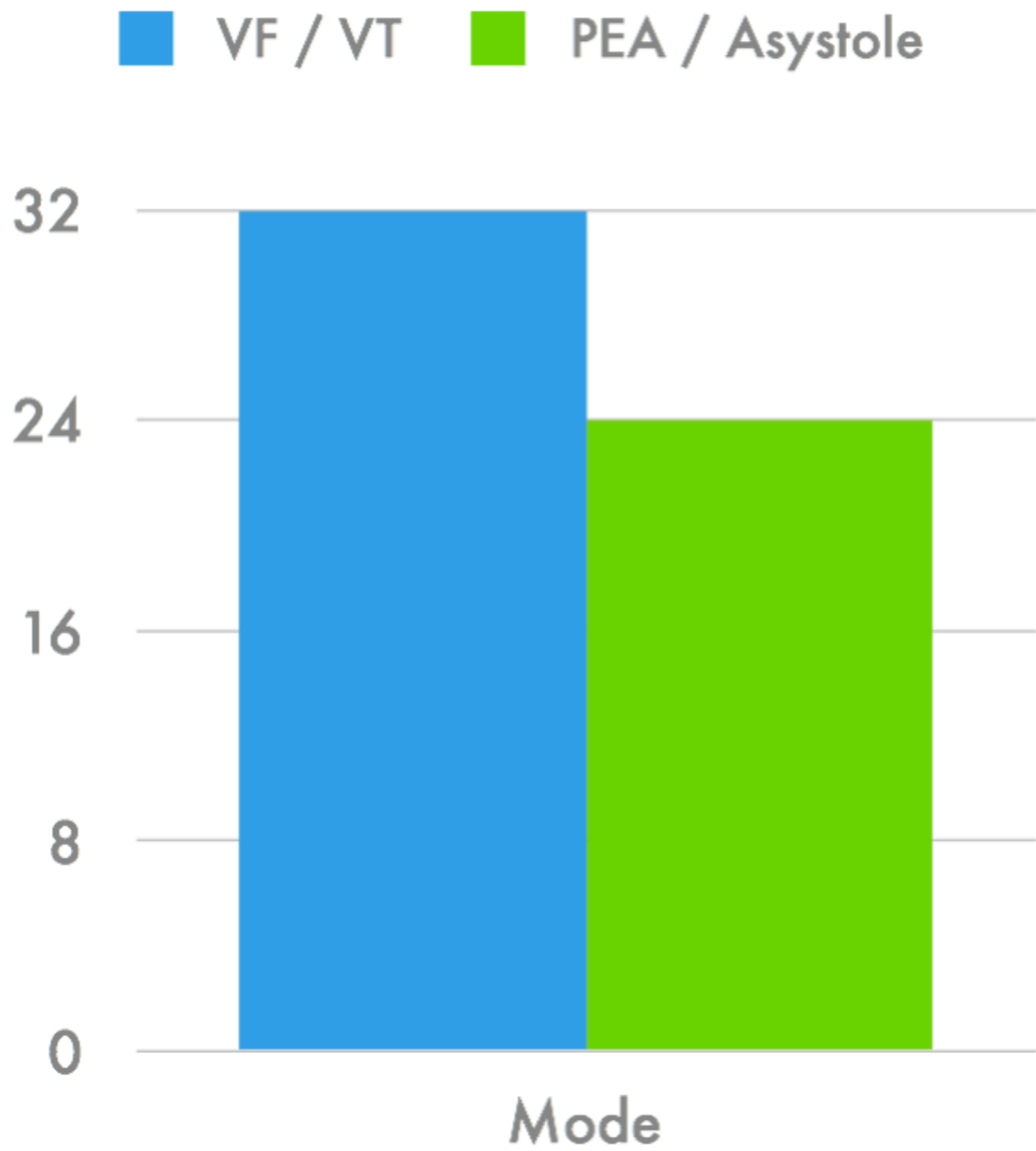
Post-ROSC treatment

Antibiotics PCI T^c control Steroid Other

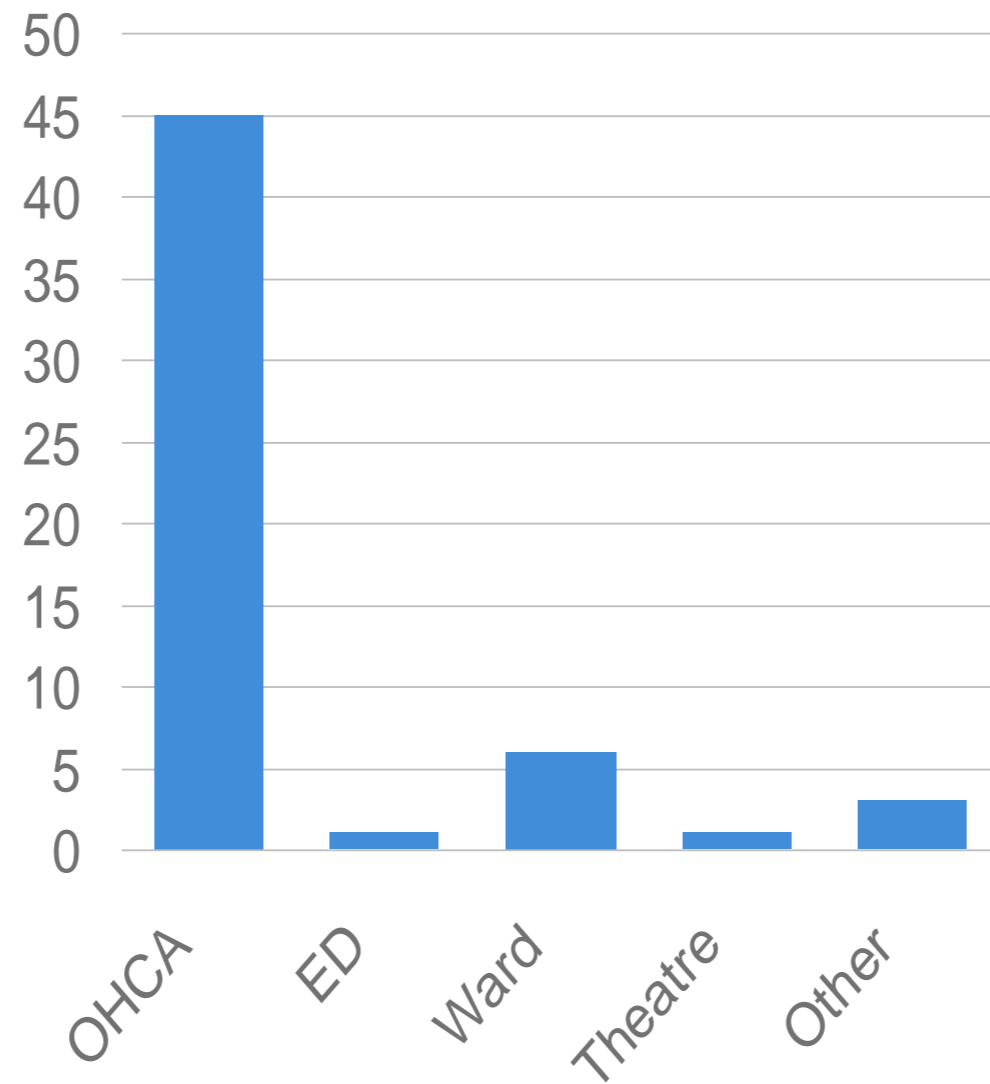
Details of other:

Results

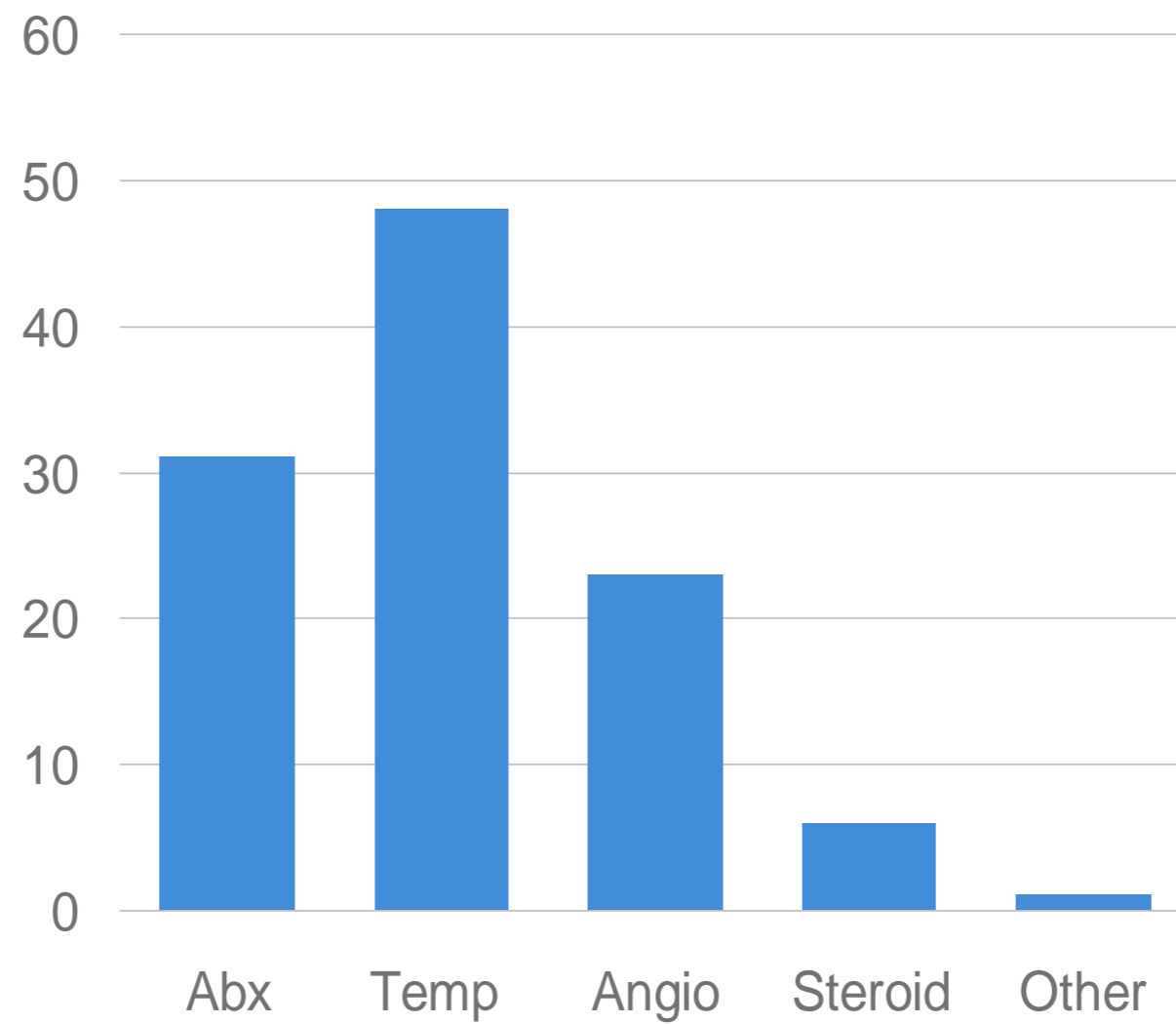
56 patients



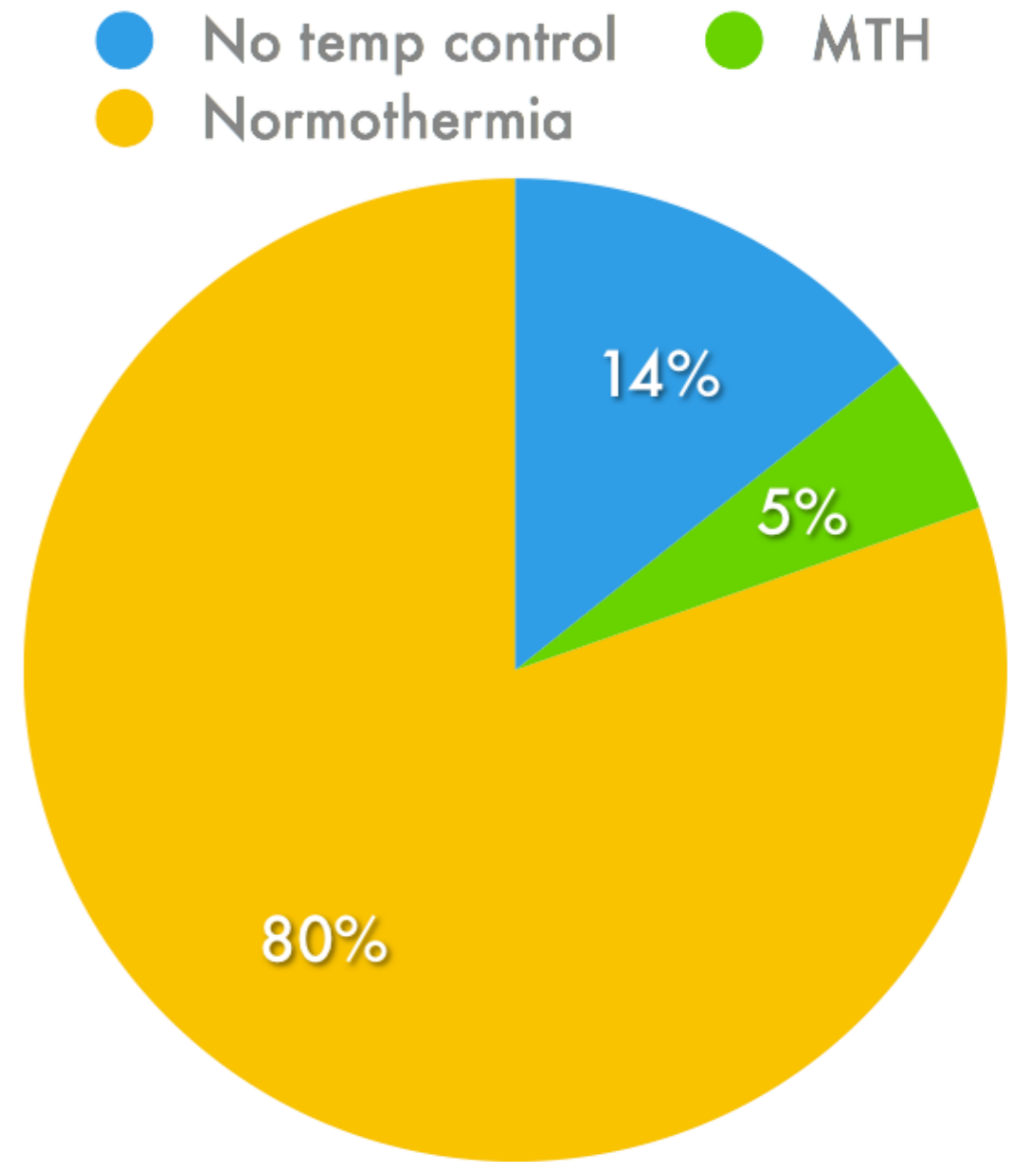
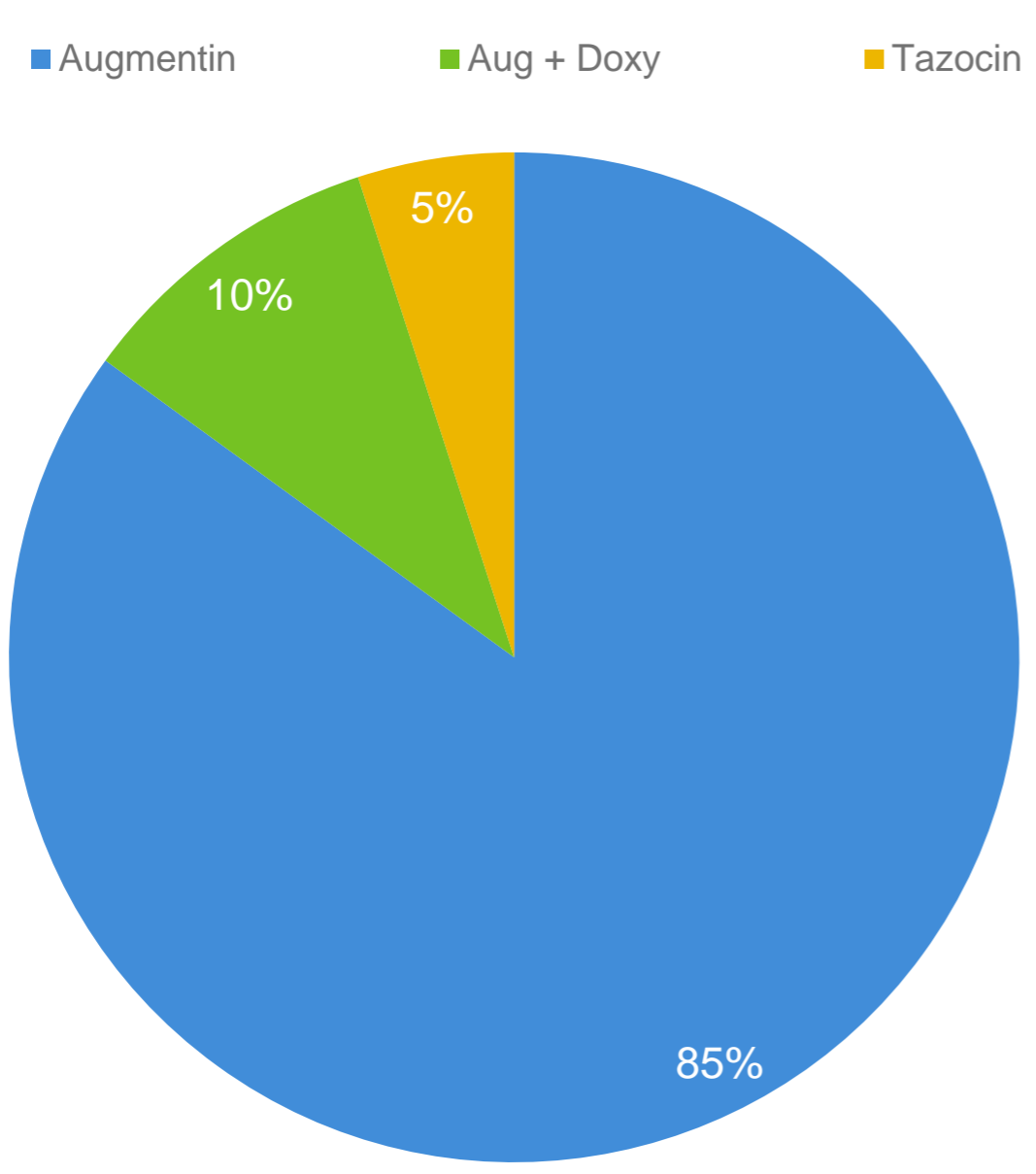
Results



Results



Results



Results

| | Admission T | Time to target (mins) | Length of T (hrs) |
|---------|-------------|--------------------------|----------------------|
| Median | 35.1 | 200 | 24 |
| Average | 34.7 | 282 | 30 |
| SD | 1.4 | 383 | 16 |

Results

| n = 22 | Hx | Exam | SSEP | EEG |
|---------------------------|----|------|------|-----|
| Method of prognostication | 19 | 15 | 4 | 9 |

Results

Patients with Early Onset Pneumonia = 20

No. died in ICU = 26 (46%)

No. pre-treated with abx = 9

No. died after withdrawal = 22 (39%)

ARR = 0.09

Fisher's exact = 0.58

No. pts on early abx with EOP = 11

Results

Developed an EOP: YES NO (COMPLETE CRITERIA)

| | |
|---|--|
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| AND | | | | OR | | | |
|------------------|---|----------|-------|--|--|--|--|
| Criteria | Quantitative | | | Criteria | | | |
| Positive culture | Aspirate (10 ⁶ cfu/ml) | | | Purulent aspirates | | | |
| | BAL (10 ⁴ cfu/ml) | | | FiO ₂ /PaO ₂ < 32kPa | | | |
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| Flora isolated | | | | | | | |
| | Qualitative | | | | | | |
| Growth | Minimal | Moderate | Heavy | | | | |
| Flora isolated | | | | | | | |

- Tazocin
- Amox
- Levo
- Augment
- Ben Pen
- Mero
- Doxy

Staph Aureus x2
Enterobacter
Moraxella
Candida
E-coli



Discussion

- Very rapid uptake of normothermic temp control
- Significant use of prophylactic abx
- ?PCI under-utilised
- ?role for steroids
- EOP in 36% patients