

# *Might TACO be the most critical transfusion safety concern ?*

## *Education for junior doctors to improve TACO awareness and management*

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# Background.

- 2013 :
  - In our institution **detection** of 3 fatal, confirmed but **unreported**, TACOs.
- Root cause analysis :
  - Poor knowledge of this risk among doctors.
    - ▶ Lack of prevention, incorrect diagnosis, inappropriate treatment



# Aim

Enhance transfusion skills of doctors, especially juniors.

➤ To reduce the risk of (fatal) TACO

# Population and method

- Population
  - All junior doctors
    - on their first training term in our institution
    - Whatever previous training or working experience
    - Why juniors ?
- Method
  - Compulsory, short, « on the field » training sessions
    - Transfusion guidelines and practice
    - Transfusion safety
      - emphasising detection, prevention and notification of TACO
  - Beginning in the May 2014 term

# Results

1. Attendance : 80-85 % of juniors
2. Increase in rates of reported and confirmed TACOs
3. But no fatal case since the beginning of the program

TACOs : rate/100,000 LBP (imputability 2,3)

Year (15000 LBP/year)	All TACOs P=0.05	Acute Pulmonary edema P<0.04
2012	74	22
2014	107	57
2015	143	75
(Jan-Feb 2016)	(360)	(200)

# Characteristics of cases

- RBC only
    - (RBC = 70 % of all LBP)
      - 50% on first bag
  - Chronic anemia (Normo or hypervolemia)
  - age >80
  - low weight
  - High blood pressure, cardiac or valve defect, kidney impairment
- = Potential risk factors



# Comparison of rates

In our institution = 12 fold the national rate

For 100,000 LBP	TACOs	Acute Pulmonary edema
France 2014	10.7	6
<b>Our institution 2015</b>	<b>143</b>	<b>75</b>



# Discussion

## Main achievements

1. No fatal case of TACO  
since the beginning of the training program
2. Dramatic increase in notification rates :
  - Better knowledge = better detectability
    - Earlier diagnosis → reduction of severity
    - Better diagnosis → efficient treatment
  - Enhancement of prevention measures





# Questions

Are known TACO's the emerged part of the iceberg ?

- What is the actual rate ?

Risk factors : Suspected but

- need to be tested
- assessed precisely
  - separately
  - interactions

# Conclusion

- Criticality  
= Frequency  $\times$  seriousness  $\times$  Poor detectability

might TACO be the most critical hazard of transfusion ?

- Suggestion: active haemovigilance surveys
  - Actual incidence rate
  - Risk factors

Improvement of patient transfusion safety



Thank you for you attention