Taurolidine versus Saline to prevent catheter sepsis in patients on home parenteral nutritional

A double-blind randomized controlled trial

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Disclosures

- This study was sponsored by Geistlich Pharma AG, manufacturer of Taurosept (2% taurolidine)
Case

- Mrs. B, 35 years, mother of 3 children. No medical history.

- Hospitalized for 3 months:
  - Mesenterial thrombosis
  - Extensive surgery
  - Short bowel syndrome

- Start training home parenteral nutrition

- 2 weeks at home: malaise, fever, chills

- Diagnosis: Catheter Sepsis
Catheter sepsis

- In HPN centers: 1 sepsis episode every 1–5 years

- Measures to decrease catheter sepsis:
  - Training to perform aseptic techniques
  - Antimicrobial filters
  - Topical antimicrobial agents
  - Systemic antibiotics

No measure sufficiently effective to prevent all catheter sepsis
Catheter lock solutions

- Solution injected into the catheter to prevent catheter sepsis

- Type of lock solutions:
  - Antibiotics (vancomycin)
  - Anticoagulants (heparin)
  - Antiseptic agents (ethanol)
Catheter lock solutions

- Most lock solutions have been abandoned:
  - Side effects (ethanol)
  - Damage to the catheter (ethanol)
  - Development of microbial resistance (antibiotics)
  - Lack of effect (heparin, ethanol)

What catheter lock solutions are left?
Taurolididine

- Potent antiseptic agent
- Activity against bacteria and yeasts
- Non-toxic
- No reported side-effects
- No bacterial resistance
- Works in HPN-setting

Saline

- Non-toxic
- No side-effects
- Inexpensive

Does it work?
Multicenter study

Denmark, Israel, Italy, Netherlands, United Kingdom
Male or female
18 - 80 years

Benign underlying
disease
≥2 bags per week

1 year

Taurolopidine

Saline

1 year
Main outcome:

Difference in Catheter Sepsis between TaurOLIDINE and Saline

Other outcomes:

Removal of catheters Safety
Gender

40 males
62 females
Age
52 years
Cause

60 SBS (59%)
29 Motility (28%)
Catheter

57 Hickman (56%)
24 Broviac (24%)
Catheter sepsis

52 patients (51%)
Tauroolidine

> 4x reduction in Catheter Sepsis
Safety

SIDE EFFECTS
Discussion

Strengths:
- Large study
- Representative HPN population
  - Pragmatic

Limitations:
- Different centers
Conclusion

Taurolidine

>4 times less catheter sepsis
Less removals of catheters
Safe