

**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**

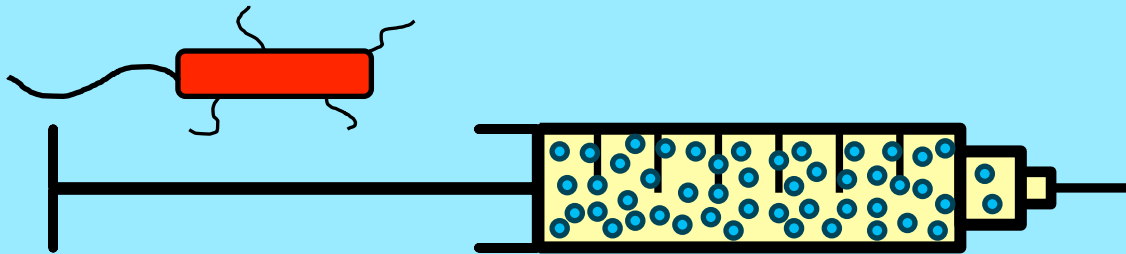
Catheter sepsis

- 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?



Taurolidine

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



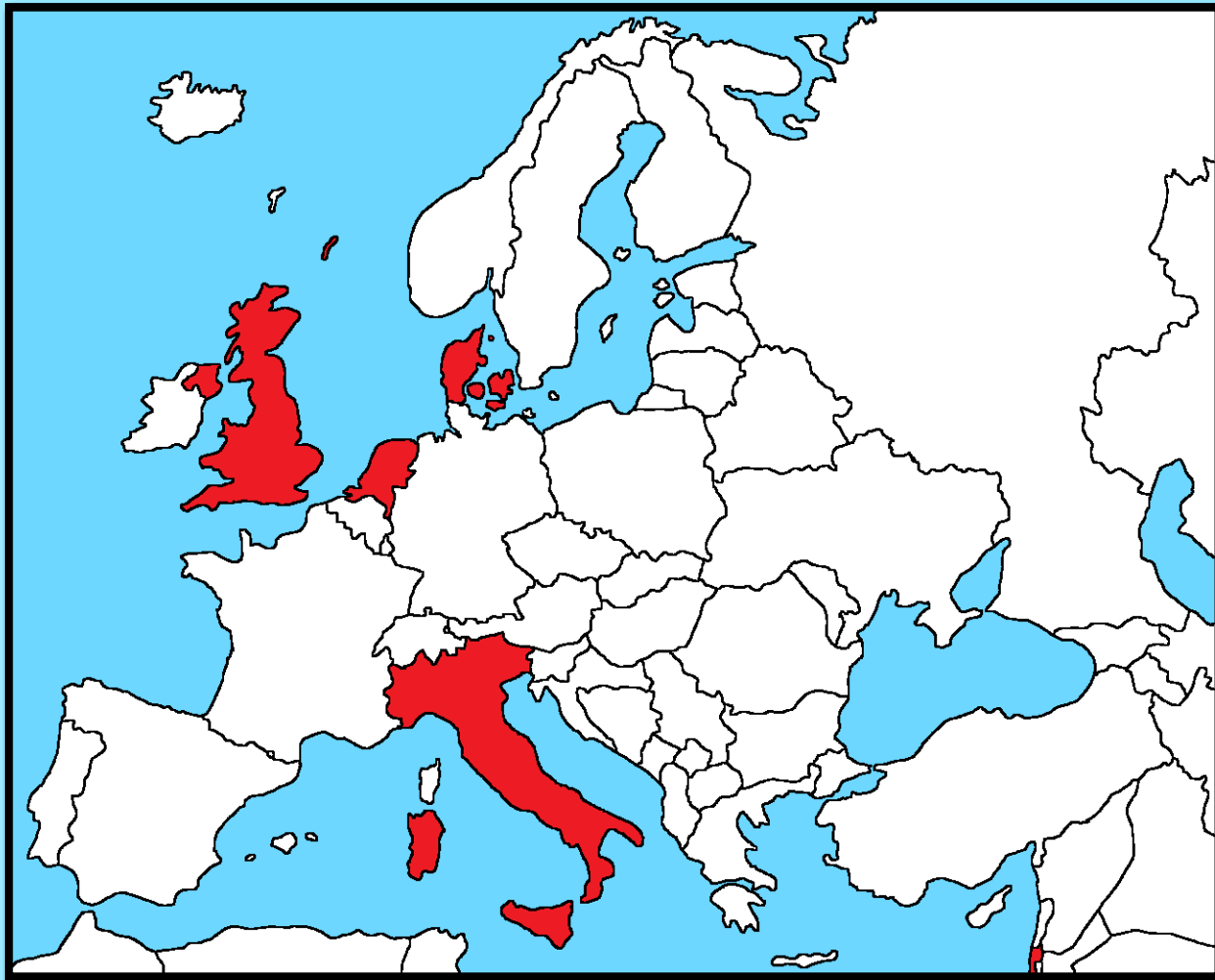
Saline

- Non-toxic
- No side-effects
- Inexpensive

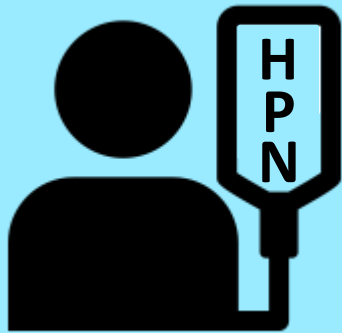
Does it work?

Multicenter study

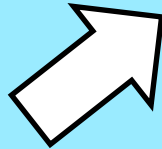
Denmark, Israel, Italy, Netherlands, United Kingdom



**Male or female
18 - 80 years**



**Benign underlying
disease
≥2 bags per week**



Tauroolidine

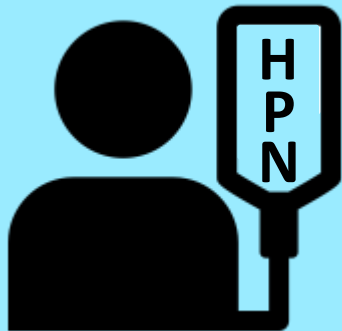
52 patients



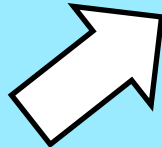
Saline

50 patients

**Male or female
18 - 80 years**



**Benign underlying
disease
≥2 bags per week**



Taurolidine

1 year



Saline

1 year

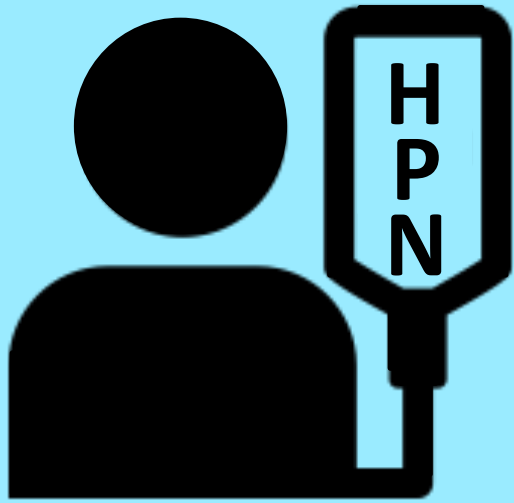


Main outcome:

**Difference in
Catheter Sepsis
between Taurolidine and Saline**

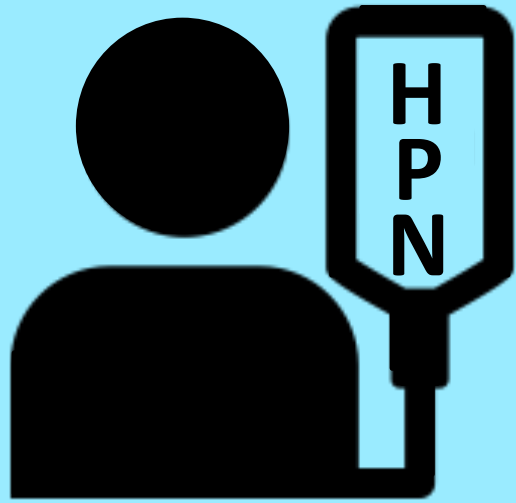
Other outcomes:

**Removal of catheters
Safety**



Gender

40 males
62 females



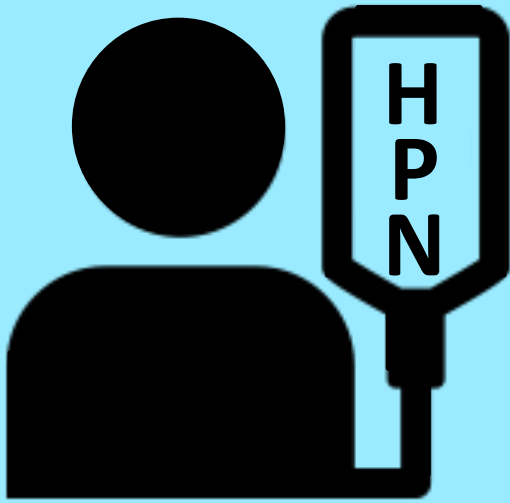
Age

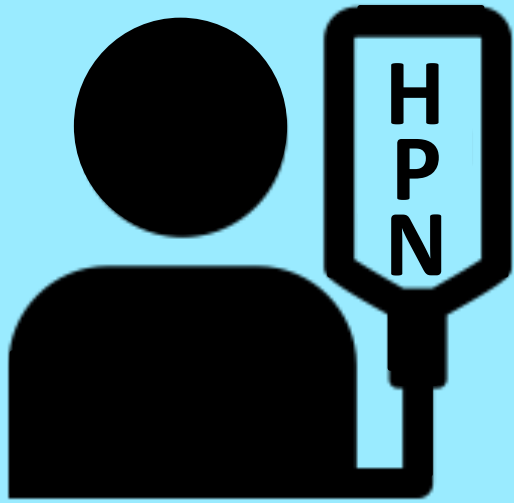
52 years

Cause

60 SBS (59%)

29 Motility (28%)

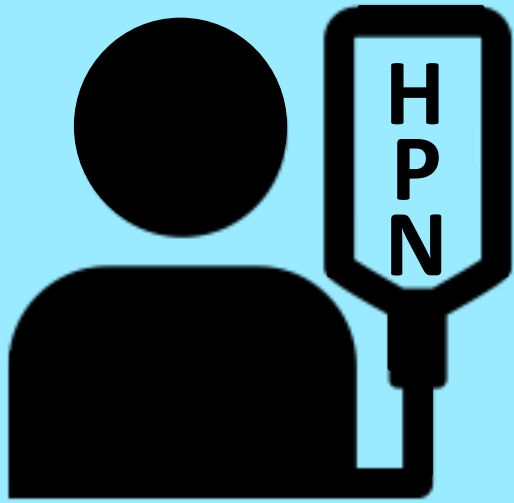




Catheter

57 Hickman (56%)

24 Broviac (24%)



Catheter sepsis

52 patients (51%)

Catheter Sepsis

Taurolidine

5



Saline

18



0 1 2 3 4 5 6 7 8 9 10 11 12 13 14

Months

Taurolidine



> 4x reduction in Catheter Sepsis

Removal of Catheters

Taurolidine

2



Saline

8



0 1 2 3 4 5 6 7 8 9 10 11 12 13 14

Months

Safety



Discussion

Strengths:

Large study

Representative HPN population

Pragmatic

Limitations:

Different centers

Conclusion

Taurolidine

>4 times less catheter sepsis

Less removals of catheters

Safe