

The CARRIER trial is designed to identify the most safe and effective long-term S. aureus carriage decolonization strategy in HPN patients” Gompelman et al (2018).

Abstract:

BACKGROUND: Patients with long-term intestinal failure are usually treated by means of home parenteral nutrition (HPN) where they administer their nutritional formulation intravenously via a central venous access device (mostly a catheter). This implies that such patients are exposed to a lifelong risk of developing Staphylococcus aureus bacteremia (SAB). SAB poses a threat to both catheter and patient survival and may lead to frequent hospitalization and a permanent loss of vascular access. In other clinical settings, S. aureus carriage eradication has been proven effective in the prevention of S. aureus infections. Unfortunately, there is a complete lack of evidence in HPN support on the most effective and safe S. aureus decolonization strategy in S. aureus carriers. We hypothesized that long-term S. aureus decolonization in HPN patients can only be effective if it is aimed at the whole body (nasal and extra-nasal) and is given chronically or repeatedly on indication. Besides this, we believe that S. aureus carriage among caregivers, who are in close contact with the patient, are of great importance in the S. aureus transmission routes.

METHODS/DESIGN: The CARRIER trial is a randomized, open-label, multicenter clinical trial in Dutch and Danish hospitals that treat patients on HPN. A total of 138 adult HPN patients carrying S. aureus will be randomly assigned to a search and destroy (SD) strategy, a quick and short, systemic antibiotic treatment, or a continuous suppression (CS) strategy, a repeated chronic topical antibiotic treatment. The primary outcome measure is the proportion of patients in whom S. aureus is totally eradicated during a 1-year period. Secondary outcomes are time to successful eradication, long-term antimicrobial resistance, adverse events, patient compliance, incidence of (S. aureus) infections, catheter removals, mortality rates, S. aureus transmission routes, quality of life, and health care costs.

DISCUSSION: The CARRIER trial is designed to identify the most safe and effective long-term S. aureus carriage decolonization strategy in HPN patients. This will eventually lead to a better understanding of long-term S. aureus decolonization treatments in general. The results of this study will have a great impact on our daily clinical practice, which eventually may result in less S. aureus-related infections.

TRIAL REGISTRATION: [ClinicalTrials.gov](https://clinicaltrials.gov); NCT03173053 . Registered on 1 June 2017.

[Full Text](#)

Reference:

Gompelman, M., Wouters, Y., Kievit, W., Hopman, J., Wertheim, H.F., Bleeker-Rovers, C.P. and Wanten, G.J.A. (2018) Long-term Staphylococcus aureus decolonization in patients on home parenteral nutrition: study protocol for a randomized multicenter trial. *Trials*. 19(1), p.346.

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