
VIT
VICTORY

Lotte & John Hecht Memorial Foundation

CDMRP

VIT VICTORY

A phase III multi-center randomized trial:

VItamin C in Thermal injuRY: The VICToRY Trial

Clinical trials.gov ID #NCT04138394

Sponsor: Dr. Daren Heyland

Principal Investigators:

Dr. Daren Heyland, Critical Care Department, Queen's University, Kingston, ON, Canada

Dr. Christian Stoppe, Anesthesiology Department, Wurzburg University, Wurzburg, Germany

Dr. Leopoldo Cancio, Director, U.S. Army Burn Center, USAISR, Fort Sam Houston, TX, U.S.A.

Project Leader: Maureen Dansereau, Critical Care Department, Queen's University, Kingston, ON, Canada

Critical Care Nutrition

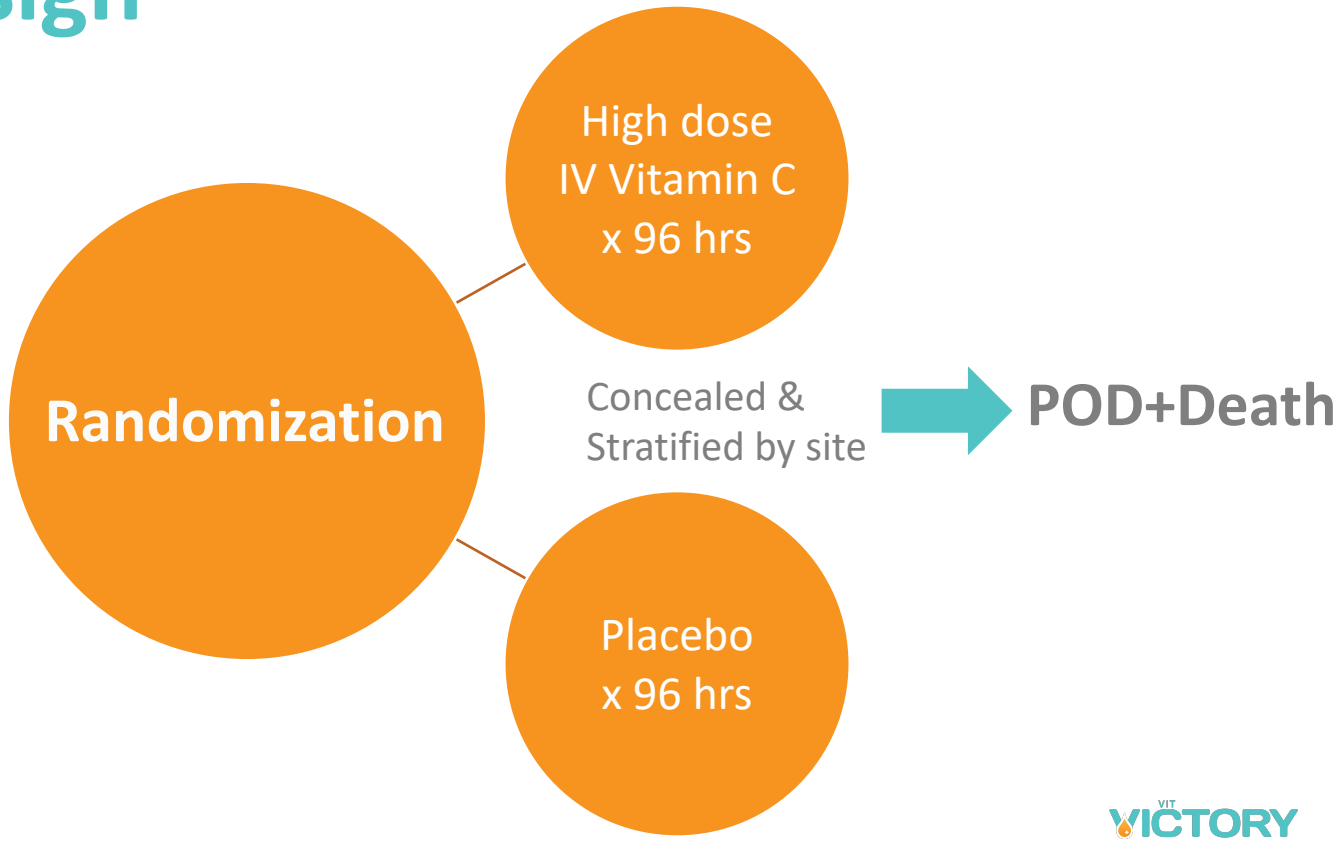
Queen's University

Clinical Evaluation Research Unit

Study Design

Double blind

666 patients
≥18 years of age
Deep 2nd and/or 3rd degree burns requiring skin grafting with TBSA ≥ 20%.



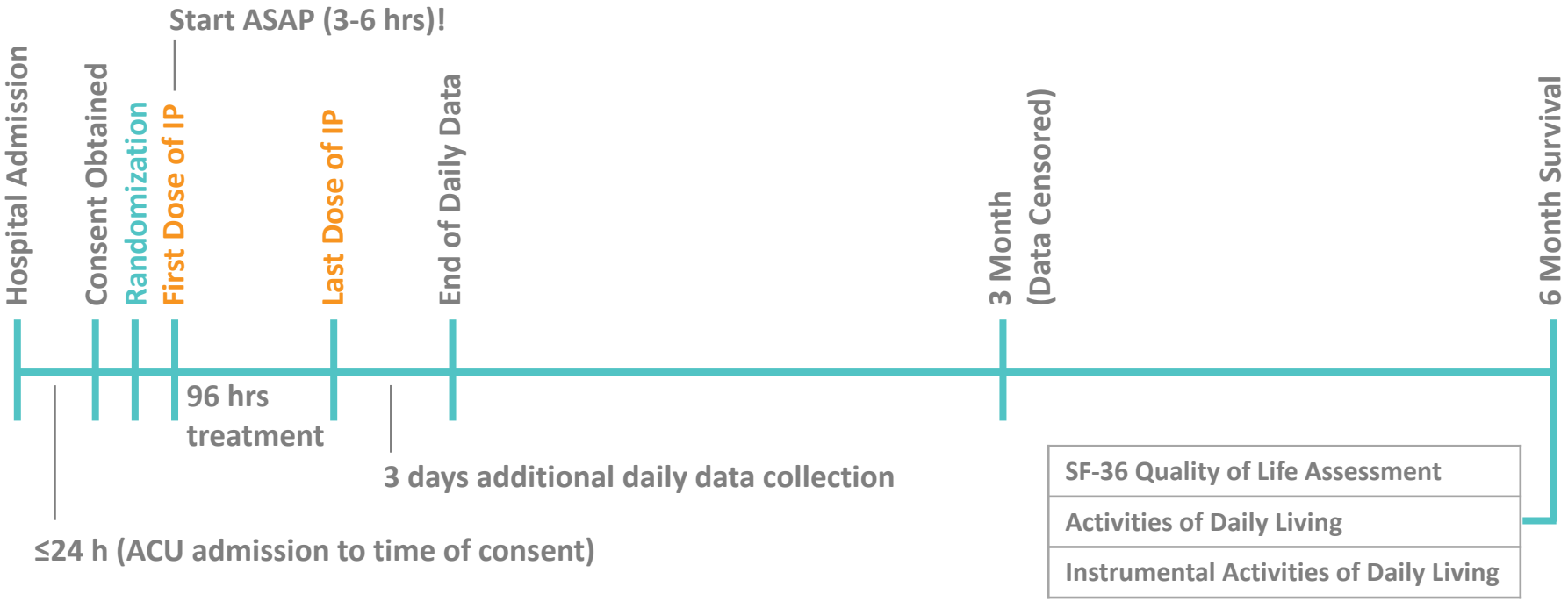
Critical Care Nutrition

VIT VICTORY

Overall Aim

The overall aim of the VICToRY study is to reduce the burden of illness associated with significant burn injury using a naturally occurring substance, vitamin C!

Study Overview



Critical Care Nutrition

VICTORY

Investigational Product (IP) Administration

Investigational Product (IP)

Active
Vitamin C

OR

Control/Placebo
D5W or Saline

IP Dosing and Administration

- Vitamin C at 200mg/kg/day in divided doses, q6h for up to 96 hours (4 days/16 doses) or until hospital discharge.
- Patients who weigh more than 150kg will be dosed based on a weight of 150 kg.
- The total daily dose (mg/day) and single dose (mg/dose) will be calculated by the Central Randomization System (CRS). Additional calculations will be done by pharmacy.
- Vitamin C will be diluted in D5W or 0.9% NaCl to a concentration between 36 mg/mL and 92 mg/mL.
- Infusion rate ≤ 100 mg/min.

Timing of Study Intervention

- IP should start as soon as possible following randomization.
- IP will be given every 6 hours for 96 hours (16 doses).
- If IP starts at 2:00 pm on a Tuesday the doses will be:
  - Tuesday 14:00, 20:00
  - Wednesday 02:00, 08:00, 14:00, and 20:00
  - Thursday 02:00, 08:00, 14:00, and 20:00
  - Friday 02:00, 08:00, 14:00, and 20:00
  - Saturday 02:00, 08:00

IP Administration Procedures

- IP must be administered using an infusion pump and can be given through a central or peripheral line.
- Prepare and hang IV bag per local standard procedures.
  - Assess the site, flush according to local SOP, clean the port, hang bag.
- Infuse per pharmacy instructions on the bag (≤100mg/min).
- Do Not co-administer with any other medication.
  - There is no information available concerning compatibility of IP with other drugs. Therefore, IP should not be co-administered with any other medications.

IP Administration Procedures

- Infuse IP through a dedicated port:
  - One port of a triple lumen
  - Piggyback ONLY with NaCl 0.9% (normal saline) or D5W
  - IP is compatible with Lactated Ringers (LR) and may be administered with LR at a Y site.
  - IP is compatible with IV nutrition.

IP Administration Procedures

- The IP bag and tubing do not need to be protected from light during infusion. According to stability testing, vitamin C concentration between 36 – 92 mg/mL (diluted in NaCl 0.9% or D5W) is physically and chemically stable for up to 75 hours at room temperature not protected from light.
- The IV tubing should be primed with IP solution. Be careful not to waste IP when priming the lines.
- Antibiotic tubing is recommended for IP administration.
- Following completion of infusion, flush line with NaCl 0.9% to ensure patient receives full dose.

IP Continuation outside of the ACU

- If a participant is transferred out of the Acute Care Unit (ACU) before the 96 hours protocol is completed, the treatment will be continued on the step-down unit or ward until the last (16^{th}) dose of investigational product (IP) is administered or the patient is discharged from the hospital, whichever comes first.
- IP should only be discontinued prior to administration of all 16 doses if the patient is discharged from the hospital.

Examples of some Infusion Times

kg	mg/day	mg/dose	mL	minutes
Dosing Weight	Daily Dose (based on 200 mg/kg/day)	Single Dose (dosing q6h)	Min volume/dose (based on max conc. 92mg/mL)	Min infusion rate (based on max rate 100mg/min)
50	10,000	2,500	27	25
75	15,000	3,750	41	37.5
100	20,000	5,000	54	50
125	25,000	6,250	68	62.5
150	30,000	7,500	82	75

Interrupted or Missed Dose of IP

+ If possible, do not stop IP for procedures or surgery.
+ If IP is stopped, restart as soon as possible and complete the infusion.
+ Record the start and stop time of the infusion and any interruptions.
+ Record the total volume infused
+ Provide explanation if the entire volume is not infused.

Interrupted or Missed Dose of IP

- In the event of a missed dose, please work to make up the missed dose as soon as possible, using the following guidelines:
  - Do not administer make-up doses with scheduled doses.
  - Leave at least one hour between the end of one administration and the start of the next.
  - The patient must be off of study product infusion for a minimum of 60 minutes before you begin infusing the next dose.
  - Delay the start of the next scheduled dose to accommodate the make-up dose.
- It is vital that all doses of IP are administered.

Unused IP

- The clinical staff should dispose of unused IP in accordance with local procedures for the destruction of drugs.
- The empty IP bags do not need to be returned to the pharmacy after the IP has been administered.

IP Non-Compliance

+ Record any interruptions in IP administration.
+ Inform the study team of missed or partial doses right away.
+ Continue administering the study investigational product until all doses have been administered or the study team communicates the patient is no longer on the study.

Glucose Measurements

+ Due to the similar molecular structure of vitamin C and glucose it is possible that capillary blood sugar point-of-care devices will report artificially high glucose measurements. To that end, we are mandating that glucose may only be measured with one of the following 3 systems:
  1. Core Lab
  2. POC arterial blood gas machine validated in the presence of high plasma concentrations of vitamin C
  3. Nova Biomedical StatStrip glucometer (validated accurate in the presence of high plasma concentrations of vitamin C)

Glucometers and Test Strips

- The following items have been shipped to your site for use with VICToRY study patients:
  - Nova Biomedical StatStrip Xpress glucometers
  - StatStrip Xpress test strips
  - Control solutions

  Please use the Nova Biomedical StatStrip Xpress meters and supplies provided for all point of care glucose testing for patients enrolled in this study.

Glucose Testing Post Treatment

- High plasma concentration of vitamin C may be observed up to 7 days after the last dose of vitamin C is received.
- For patients receiving oral hypoglycemics or insulin, one of the 3 validated methods must be used to measure glucose for 7 days after the last dose of IP is received.
- For patients that do NOT require oral hypoglycemics or intravenous insulin, you may follow hospital procedure for glucose testing after the last dose of IP is received.

Questions

VIT VICTORY