SilverStream
Medical

SURE | SWIFT | SAFE

SUCCESS STORIES
FIRST TIME RIGHT

@SilverStream Medical
Plastic and Burns Reconstructive Edition

SilverStream

A SUPERIOR WOUND MANAGEMENT SOLUTION

The Power of Synergy

SilverStream Medical

MEDICAL DEVICE MD

SilverStream® is intended for management of wounds such as:

- **Stage I-IV Pressure Ulcers**
- **Stasis Ulcers**
- **Post-Surgical Wounds**
- **Diabetic Foot Ulcers**
- **First And Second-Degree Burns**
- **Cuts, Abrasions and Minor Skin Irritations**

Silverstream® is a sterile buffered solution with pleasant odor.

Silverstream® is a clear solution, protected from microbial contamination by a low concentration ionic silver.

Each mL contains an antimicrobial ionic silver in the form of silver nitrate 0.01% (w/v).

DISCLAIMER:

1. This document contains patient-specific information tailored to individual medical histories and wound conditions under medical supervision. The results and effectiveness of the product may vary among patients and may not be uniform in all cases. This disclaimer clarifies that the medical information provided is for informational purposes only and does not constitute advice.
2. Every effort has been made to compile comprehensive and accurate information from various countries, including India, Israel, Mexico, the USA, and others.
3. Any information provided in this booklet should not be used against Silverstream Medical Ltd or its medical advisory.
4. Prescription (RX) Indications: SilverStream® is intended for use under the supervision of a healthcare professional for the management and moisturizing, for mechanical cleansing and removal of foreign material including micro-organisms and debris from wounds such as stage I-IV pressure ulcers, stasis ulcers, diabetic foot ulcers, post-surgical wounds, first- and second-degree burns, cut abrasions and minor skin irritations.
5. SilverStream Solution is authorized for Homecare use under Prescription (RX) Indications. It is imperative that individuals seek guidance from a healthcare professional before initiating treatment.
6. OTC Indications : SilverStream® is intended for the management and moisturizing of minor cuts, minor burns, abrasions, and irritated areas.
7. Not all products are registered and approved for sale in all countries and regions. Indications for use may also vary by country and region. Please contact your country representative for product availability.
8. The information provided here does not replace professional medical advice, diagnosis, or treatment. Any misuse or deviation from recommended usage should be avoided, and consultation with a healthcare professional is strongly advised.
9. All content, including but not limited to text, images, and multimedia, within this medical case study catalog is the intellectual property of Silverstream Medical Ltd. Unauthorized use, reproduction, or distribution of the content without explicit written consent is strictly prohibited.
10. The information presented in the case studies is intended for educational and informational purposes only.
11. Any request for use, reproduction, or distribution of the content should be directed to info@silverstreammed.com.
12. The views and opinions expressed in the case studies are those of the respective authors and do not necessarily reflect the official policy or position of Silverstream Medical Ltd.
13. In certain markets, SilverStream® is marketed under the brand names Qurion® or SealStream.

SilverStream plays a crucial role
in Plastic and Reconstructive Surgery,
particularly in flap procedures, grafting,
implant surgeries, and burns treatment.

SILVERSTREAM IS IMPORTANT IN PLASTIC AND BURNS RECONSTRUCTIVE AREA

SilverStream Medical

Antimicrobial Protection

Flap & Grafting Surgeries:
In both flap and skin graft surgeries, preventing infection is critical to ensuring successful healing

Burns:
Burns are highly susceptible to infections due to the open nature of the wound and damaged skin. **SilverStream Eliminate Biofilm and Infection** Provides an added layer of protection against bacterial and fungal infections, promoting faster and safer healing of burn wounds.

Maintaining a Clean Wound Bed

Flap & Grafting Surgeries:
SilverStream's hypertonic solution helps cleanse the wound bed by drawing out excess fluid and biofilms, which are known to inhibit healing.

Burns:
In burn care, maintaining a clean wound bed helps remove necrotic tissue, debris, and slough, ensuring that the wound heals in an optimal environment without barriers to recovery.

Prevention of Surgical Site Infections (SSI) in Implant Surgeries

Implant Surgeries:
Implants used in reconstructive surgeries carry a high risk of infection, leading to complications or implant failure. SilverStream solution enhances both pre- and post-operative wound management by maintaining a clean environment through its preservative activity and antimicrobial properties. This reduces the risk of SSIs and improves the overall success rate of implant surgeries.

Supports Wound Healing & Reduces Inflammation

Effective in Chronic & Complex Wounds

Flexible Application & Ease of Use

For Surgeons: SilverStream is easy to apply in both operative and postoperative settings.

- It can be used as a solution for irrigation, a dressing for post-surgery wounds, or as a cleansing agent during debridement, making it versatile for use in all stages of reconstructive surgeries.
- By managing the infection risk and keeping the wound moist, SilverStream helps reduce inflammation, promoting a more favorable healing process.

SIILVERSTREAM REDUCING SURFACE TENSION

SilverStream Medical

Silverstream's Ability to Lower Surface Tension Plays a Significant Role in Enhancing Its Effectiveness in Wound Management

Improved Wound Cleansing

By reducing surface tension, SilverStream allows for better penetration into the wound bed, reaching deeper areas that are often difficult to clean.

This is particularly important in complex wounds, burns, and reconstructive surgeries where debris, bacteria, and biofilms may accumulate.

Facilitates Irrigation and Fluid Exchange

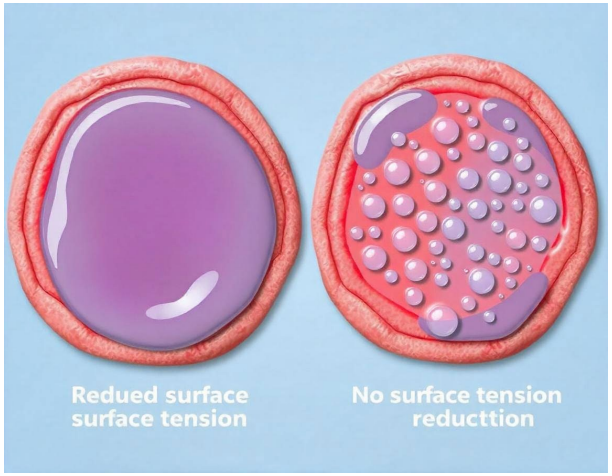
During surgical procedures like debridement, reducing surface tension facilitates more effective wound irrigation. This ensures that the wound is thoroughly cleansed, removing bacteria and contaminants while promoting fluid exchange in the wound bed, which is critical in the post-operative care of flaps, grafts, and burns.

Enhanced Removal of Biofilm and Debris

Lower surface tension helps in breaking down biofilm layers and lifting debris and slough from the wound surface.
Biofilms are often resistant to standard treatments, and their presence can severely hinder healing.
SilverStream's surfactant properties assist in biofilm removal, providing a cleaner wound environment for better graft adherence and tissue regeneration in surgeries like flaps and grafting

Better Distribution of Antimicrobial Agents

In burns, grafting, and implant surgeries, the antimicrobial agents in SilverStream (silver ions) need to be evenly distributed across the wound surface to be most effective. Reduced surface tension helps the solution spread more efficiently, ensuring comprehensive coverage, which is crucial for infection control and optimal healing



Moisture Management and Healing Environment

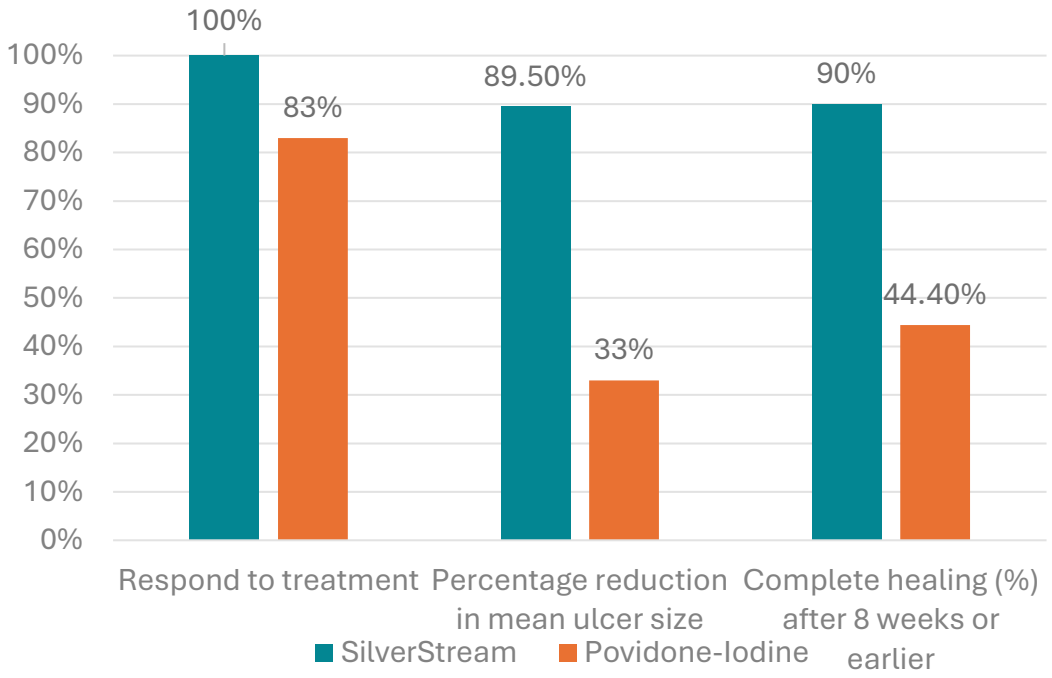
The ability to reduce surface tension also helps maintain a moist wound environment by allowing better interaction between the dressing and the wound surface. This is particularly beneficial in burns and grafting procedures, where moisture balance is essential for tissue regeneration and preventing desiccation, which can lead to graft failure or delayed healing.

CLINICAL EVIDENCE AND EFFICACY

SilverStream Medical

Wound Healing Results[1,23]

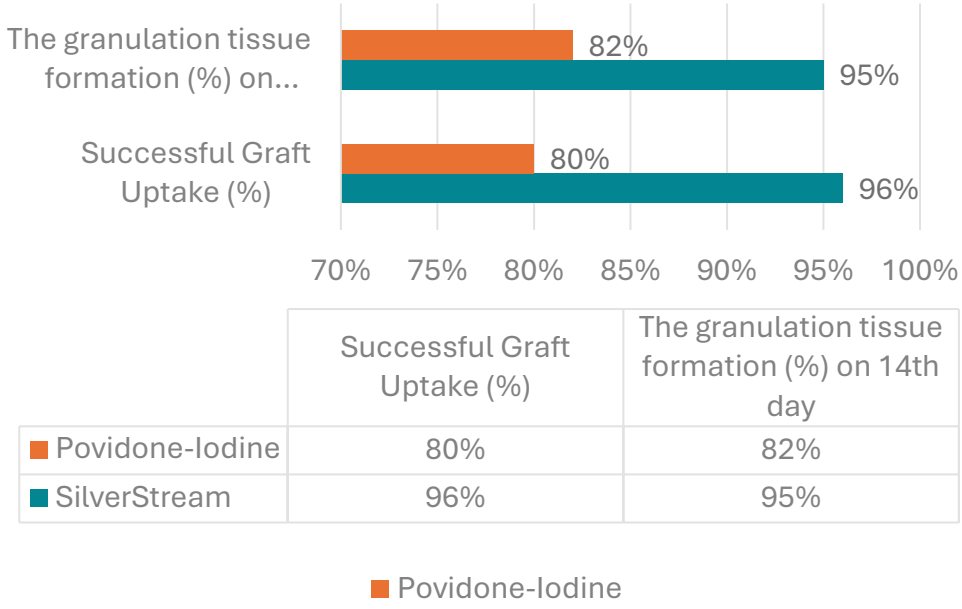
90% of chronic wounds healed at evaluation end of 8 weeks or earlier



Granulation Tissue Formation [2,19]

95% of granulation tissue formulated on 14th day

96% of successful Graft Uptake



	Successful Graft Uptake (%)	The granulation tissue formation (%) on 14th day
Povidone-Iodine	80%	82%
SilverStream	96%	95%

Elimination of infection[16]

100% Elimination of infection from all infected ulcers

Analgesic Requirement on 7th Day[20]

- Silverstream as a topical application significantly reduced analgesic requirement compared to conventional dressings. P<0.001
- Reduced in Silverstream group and Increased in Control group

CLINICAL EVIDENCE AND EFFICACY

SilverStream Medical

25 Publication

Across wound and
Post-surgical applications

4 References in Books

Across wound and
Post-surgical applications

Over 100 case studies

Across wound and post-surgical applications, including treatment of wounds with resistant bacteria

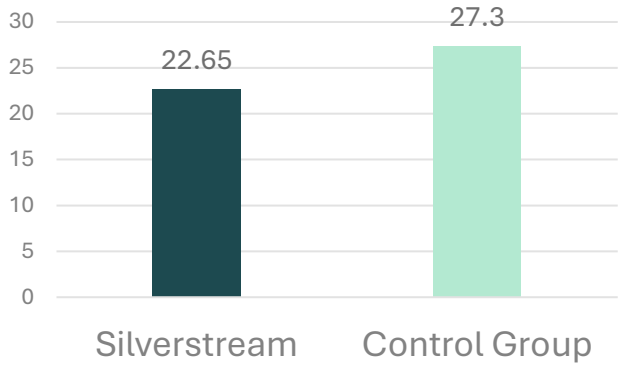
Amputated Non-healing Diabetic Foot Ulcer Healed*

Diabetic, Left Foot Amputation with Infection: Within a week of using only SilverStream, without any debridement, other topical medications, or antibiotics, the wound appeared clean with no signs of infection. Increased blood circulation was observed, leading to the development of granulation tissue. By the sixth week, the foot was entirely covered with fresh granulation tissue and had healed.

* Case Study, Dr. Yuriria Aguilar Carsolio, Clínica Comedem, Mexico

** Sukanya, C., Penugonda, A., Gandikota, V., Anupama, C., Reddy, G. Harsha Vardhan. (2020). "Role of Silver Nitrate Solution Dressings Over Conventional Dressings in Chronic Lower Limb Ulcers – A Prospective Study." IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), Volume 19, Issue 7 Ser.3 (July 2020), PP 10-14. e-ISSN: 2279-0853, p-ISSN: 2279-0861

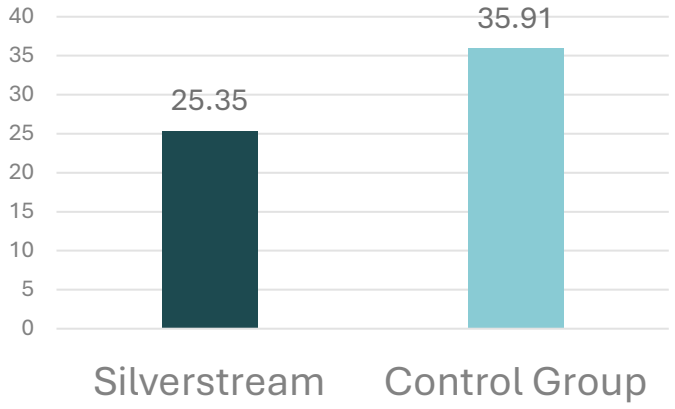
Mean number of dressings during Treatment Duration [3,22]



Significant Affordable Efficacy

Silverstream reduces wound size, speeds healing, **shortens hospital stays in 40%,** and **requires 20% fewer dressings** compared to conventional treatments.

Mean Hospital Stay (days) [2,3,19,22]



Traumatic , Diabetic, Trophic, Venous Ulcers

Diabetic Ulcers & Skin Grafting

SilverStream Medical

1

AMPUTATED DIABETIC FOOT ULCER

By Dr. Rajesh Kesavan
Place: Chennai, India
Study Initiated on: 03/2013
Age of Patient: 65 yrs
Sex: Male
Type of Wound: Amputated Diabetic Foot with Infection
Age of Wound: 16 weeks

BEFORE SILVERSTREAM - WEEK 0

Wound Condition before SilverStream:
Heavily infected Diabetic Ulcer lead to amputation of toes. The wound continued to remain in **non-healing phase for further 8 weeks due to chronic infection.**

Previous treatment used:
Surgical debridement performed with conventional **Saline and Betadine dressings.**

SilverStream Medical

AMPUTATED DIABETIC FOOT ULCER

SilverStream Treatment :

30 ml of SilverStream used per treatment. **Thrice a week dressing regime for 3 weeks** leading to **complete infection elimination. Successful skin grafting performed.**

No. of 250 ml SilverStream Bottles Used: **1**

BEFORE SILVERSTREAM WEEK 0

AFTER SILVERSTREAM - WEEK 2

AFTER SILVERSTREAM - WEEK 3

Doctor Speaks: ”

The wounds had very good granulation tissues, and hence treatment proved to be effective against chronic wounds.

Wound Characteristics	Week 0	Week 3
Wound Size	15cm^2	Skin Grafting done
Signs of Infection	Yes	No
Granulation Tissue	No, 0%	Yes, 100%
Non-viable Tissue	Yes, 100%	No. 0%

SilverStream Medical

2

AMPUTATED 9 MONTH OLD DIABETIC FOOT ULCER

By Dr. Kiran Bhise

Place: Pune, India

Study Initiated on: 02/2012

Age of Patient: 56 yrs

Sex: Female

Type of Wound: Amputated Diabetic Foot Ulcer

Age of Wound: 36 weeks

BEFORE SILVERSTREAM - WEEK 0

Wound Condition before SilverStream:

Patient with history of **Type II Diabetes** since 20 years developed **neuropathy** followed by **small toe infection** that went unattended and developed uncontrollably. This lead to hospitalization and surgery leading to **amputation of all 5 toes**. Post Surgical healing delayed with **non-healing wound** beyond 3 months.Wound condition worsened with **constant oozing out of pus and reduced circulation in wound.**

Previous treatment used:

Amputation followed by **hospitalization** with **antibacterials** along with **saline and betadine dressings.**

SilverStream Medical

AMPUTATED 9 MONTH OLD DIABETIC FOOT ULCER HEALED

SilverStream Treatment :

SilverStream was applied **25 ml twice a day** for 1 week followed by once a day dressing.

Within a week, the **wound was clean** with **no signs of infection**. **Increased blood circulation observed**, with **granulation tissue** covering the wound. Within 20 weeks, the foot was completely covered with **fresh granulation tissue** and the **foot was almost healed**. All the **oral antibiotics were discontinued** after SilverStream treatment and the wound **completely healed**.
No. of 250 ml SilverStream Bottles Used: **6**

BEFORE SILVERSTREAM WEEK 0

AFTER SILVERSTREAM - WEEK 12

AFTER SILVERSTREAM - WEEK 20

Doctor Speaks: ”

Infection had come in control with just first use. A very good topical anti-infective with biofilm penetration ability.

Wound Characteristics	Week 0	Week 20
Wound Size	9cm^2	1cm^2
Signs of Infection	Yes	Yes [10% of original]
Granulation Tissue	No, 0%	Yes, 20%
Non-viable Tissue	Yes, 10%	No. 8%

Venous Ulcers & Skin Grafting

3

24 WEEKS OLD VENOUS ULCER ON THE LEG

By Dr. Anirudh Mene

Place: Bhilai, India

Study Initiated on: 06/2013

Age of Patient: 62 yrs

Sex: Male

Type of Wound: Infected Venous Ulcer

Age of Wound: 24 weeks

BEFORE SILVERSTREAM - WEEK 0

Wound Condition before SilverStream:

Venous ulcer on the foot, **with prominent signs of infection and biofilm presence.**

No debridement was performed.

Previous treatment used:

Oral antibacterials administered.

Topical treatment done with conventional saline dressings alongside.

SilverStream Medical

24 WEEKS OLD VENOUS ULCER ON THE LEG

SilverStream Treatment :

25 ml of SilverStream used per treatment - **once a day dressing routine followed for 3 weeks**. **Infection elimination observed on day 6.**
Skin grafting performed **successfully** after 25 days.

No. of 250 ml SilverStream Bottles Used: **2**

BEFORE SILVERSTREAM WEEK 0

AFTER SILVERSTREAM WEEK 0.9 (DAY 6)

AFTER SILVERSTREAM WEEK 3.5 (DAY 25)

Doctor Speaks: ”

Very effective against infections with enhanced biofilm penetration. Helps wounds heal faster and leads to greater acceptance of Skin Grafts.

Wound Characteristics	Week 0	Week 3.5
Wound Size	12 cm^2	Skin grafting done
Signs of Infection	Yes, 100%	No
Granulation Tissue	No, 0%	Yes, 100%
Non-viable Tissue	Yes, 100%	No. 0%

SilverStream Medical

4

20 WEEKS OLD CHRONIC VENOUS ULCER WITH PRESENCE OF *PSEUDOMONAS INFECTION*

By Dr. Sandeep Naphade

Place: Pune, India

Study Initiated on: 07/2013

Age of Patient: 57 yrs

Sex: Male

Type of Wound: Infected Venous Ulcer

Age of Wound: 20 weeks

BEFORE SILVERSTREAM - WEEK 0

Wound Condition before SilverStream:

Infected Venous Ulcer With Cavity. Recurring In Nature. Signs Of *Pseudomonas aeruginosa* infection leading to **exudating wound.**

Previous treatment used:

Compression therapy along with **hydrocolloid and foam dressing** changes.

Topical antiseptics and oral antibacterials used alongside on a regular basis for 6 months.

SilverStream Medical

20 WEEKS OLD CHRONIC VENOUS ULCER WITH PRESENCE OF *PSEUDOMONAS INFECTION*

SilverStream Treatment :

~20-25 ml of SilverStream solution was used once a day for 1.5 weeks.
Infection Reduction observed with **gradual reduction in wound cavity** size**.**

No. of 250 ml SilverStream Bottles Used: **1**

BEFORE SILVERSTREAM WEEK 0

AFTER SILVERSTREAM- WEEK 1.5

Doctor Speaks:

A very good, patient friendly anti-infective solution. Helped wounds heal faster making it ready for grafting.

Wound Characteristics	Week 0	Week 1.5
Wound Size	7 cm^2	6 cm^2 with no infection
Signs of Infection	Yes, 100%	No
Granulation Tissue	No, 0%	Yes, 100%
Non-viable Tissue	Yes, 100%	No. 0%

SilverStream Medical

5

AMPUTATED LEG WITH VENOUS ULCER ON THIGHS

By Dr. Manoj, Dr. Mehta

Place: Baroda, India

Study Initiated on: 03/2012

Age of Patient: 50 yrs

Sex: Male

Type of Wound: Amputated Leg with Venous Ulcer on Thigh

Age of Wound: 24 Weeks

BEFORE SILVERSTREAM - WEEK 0

Wound Condition before SilverStream:

Right leg amputated up till the thigh region (Previous case history not available) with further **Chronic non healing venous ulcer in the thigh region** with absolutely **no blood flow.**

Previous treatment used:

The patient was being treated with **Piperacillin + Tazobactum intravenously,** along with **Cefpodoxime and Augmentin orally**.

Saline and Betadine routine dressings done topically.

SilverStream Medical

AMPUTATED LEG WITH VENOUS ULCER ON THIGHS

SilverStream Treatment :

35 ml SilverStream solution used per treatment. Dressing done **thrice a week for 3 weeks**. Surgical Debridement performed once during the treatment. After 3 weeks of treatment, **complete infection elimination** observed with **increased blood circulation** making the ulcer ready for Grafting.

No. of 250 ml SilverStream Bottles Used: **1**

BEFORE SILVERSTREAM WEEK 0

AFTER SILVERSTREAM- 3 WEEKS

Doctor Speaks: ”

SilverStream helped to improve the blood flow by eliminating necrotic tissue coupled with surgical debridement

Wound Characteristics	Week 0	Week 3
Wound Size	20 cm^2	ready for skin grafting
Signs of Infection	Yes	No
Granulation Tissue	No, 0%	Yes, 100%
Non-viable Tissue	Yes, 100%	No. 10%

SilverStream Medical

6

ELIMINATION OF *PSEUDOMONAS* INFECTION FROM 6 YEAR OLD VENOUS ULCER

By Dr. K R Sharath

Place: Bangalore, India

Study Initiated on: 07/2012

Age of Patient: 65 yrs

Sex: Male

Type of Wound: Infected Venous Ulcer

Age of Wound: 6 yrs

BEFORE SILVERSTREAM - WEEK 0

Wound Condition before SilverStream:

Patient operated for left foot **venous infection** 6 years back. **Non-healing venous ulcer** developed post surgery. **Skin grafting** was performed. However, the **ulcer resurfaced with secretions** after few months. As per **biopsy, venous doppler and culture sensitivity test – detection of** *Pseudomonas aeruginosa* **bacteria detected.**

Previous treatment used:

Patient was subjected to **Amikacin antibiotic injections** along with routine **Betadine dressing** changes.

SilverStream Medical

ELIMINATION OF *PSEUDOMONAS* INFECTION FROM 6 YEAR OLD VENOUS ULCER

SilverStream Treatment :

30 ml SilverStream used per treatment with **thrice a week** dressing changes for **8 weeks.**

Elimination of ***Pseudomonas aeruginosa*** was observed leading to a **healthy red wound** which was later taken for **skin grafting.**

No. of 250 ml SilverStream Bottles Used: **5**

BEFORE SILVERSTREAM WEEK 0

DURING TREATMENT WITH SILVERSTREAM - WEEK 4

AFTER COMPLETE TREATMENT WITH SILVERSTREAM- WEEK 8

Doctor Speaks: ”

SilverStream helped in wound healing process by elimination of bacterial load on the wound bed.

Wound Characteristics	Week 0	Week 8
Wound Size	12.5 cm^2	Skin grafting done
Signs of Infection	Yes	No
Granulation Tissue	No, 20%	Yes, 100%
Non-viable Tissue	Yes, 70%	No. 10%

Burns & Skin Grafting

SilverStream Medical

7

FURNACE BURNS ON FOREARM SEVERELY INFECTED WITH *STAPHYLOCOCCUS AUREUS*

By Dr. Anirudh Mene
Place: Bhilai, India
Study Initiated on: 06/2013
Age of Patient: 12 yrs
Sex: Male
Type of Wound: Furnace Burn
Age of wound: 1 week

BEFORE SILVERSTREAM - WEEK 0

Wound Condition before SilverStream:

2nd degree burns on the forearm of the **patient tested positive on culture for *Staphylococcus aureus*.**
Blood flow on the wound bed hampered due to eschar.

Previous treatment used:

Conventional **saline/Betadine** dressings were used.
No significant changes observed in the **wound bed condition.**

SilverStream Medical

FURNACE BURNS ON FOREARM SEVERELY INFECTED WITH *STAPHYLOCOCCUS AUREUS*

SilverStream Treatment :

20 ml SilverStream used per treatment everyday for **12 days.**
Complete elimination of infection observed in **4 days.**
Restoration of blood flow in the **wound bed** was seen.
Wound size reduced to **less than half in 12 days.**
No. of 250 ml SilverStream Bottles Used: **1**

BEFORE SILVERSTREAM WEEK 0

AFTER SILVERSTREAM WEEK 0.75 (DAY 4)

AFTER SILVERSTREAM WEEK 1.75 (DAY 12)

Wound Characteristics	Week 0	Week 1.75
Wound Size	13.5 cm^2	7 cm^2
Signs of Infection	Yes	No
Granulation Tissue	No, 10%	Yes, 100%
Non-viable Tissue	Yes, 80%	No. 0%

Doctor Speaks: ”

Very effective against infections. Helps wounds heal faster and greater acceptance of Skin Grafts.

SilverStream Medical

3RD DEGREE BURN ON THE ABDOMEN

By Dr. Sandeep Naphade

Place: Pune, India

Study Initiated on: 06/2013

Age of Patient: 35 yrs

Sex: Male

Type of Wound: Chemical Burn Wound

Age of wound: 0 week

BEFORE SILVERSTREAM - WEEK 0

Wound Condition before SilverStream:

70% of the abdominal area burnt (1⁰ Burns), severe infection present.

Previous treatment used:

SilverStream used since day 1st to **prevent any systemic infection.**

SilverStream Medical

3RD DEGREE BURN ON THE ABDOMEN

SilverStream Treatment :

80ml SilverStream was used per treatment, **thrice a week for 3 weeks.**
Complete infection elimination observed with **scab formation.**
Successful skin grafting performed at the end of **3 weeks.**

No. of 250 ml Silver Stream Bottles Used: **2**

BEFORE SILVERSTREAM WEEK 0

AFTER SILVERSTREAM - WEEK 1 AFTER GRAFTING

AFTER SILVERSTREAM - WEEK 3 AFTER GRAFTING

Wound Characteristics	Week 0	Week 3
Wound Size	80% Abdomen area burnt	Skin grafting done
Signs of Infection	Yes, 100%	No
Granulation Tissue	No, 0%	Yes, 85%
Non-viable Tissue	Yes, 100%	No. 20%

Doctor Speaks:

A very good, patient friendly wound cleanser. Helped wounds heal faster and made it ready for grafting.

9

DOMESTIC BURN WOUND OF A MINOR ON SHOULDER AND UNDER ARM

By Dr. Dr.Sandeep Naphade

Place: Pune, India

Study Initiated on: 06/2013

Age of Patient:12 yrs

Sex: Male

Type of Wound: Domestic Burn Wound

Age of wound: 0 week

BEFORE SILVERSTREAM - WEEK 0

Wound Condition before SilverStream:

Child with **burns on left shoulder and underarm region.**

Previous treatment used:

SilverStream used from day 1

SilverStream Medical

DOMESTIC BURN WOUND OF A MINOR ON SHOULDER AND UNDER ARM

SilverStream Treatment :

40 ml of SilverStream was used every **alternate day for 2 weeks.**
The wound was healed completely followed by skin grafting.

No. of 250 ml SilverStream Bottles Used: **1**

BEFORE SILVERSTREAM WEEK 0

AFTER SILVERSTREAM – WEEK 2 AFTER GRAFTING

Doctor Speak:

A very good, patient friendly wound cleanser. Helped wounds heal faster and made it ready for grafting.

Wound Characteristics	Week 0	Week 2
Wound Size	25 cm^2	Skin grafting done
Signs of Infection	Yes, 20%	No
Granulation Tissue	Yes, 20%	Yes, 100%
Non-viable Tissue	Yes, 100%	No. 0%

10

PSEUDOMONAS INFECTION ELIMINATION IN AN ELECTRIC BURN PATIENT

By Dr. Dinesh Chauhan
Place: Rajkot, India
Study Initiated on: 04/2012
Age of Patient: 40 yrs
Sex: Male
Type of Wound: Electric Burn
Age of wound: 1 week

BEFORE SILVERSTREAM - WEEK 0

Wound Condition before SilverStream:
Electric burns + *Pseudomonas* infection + debris and secretions.

Previous treatment used:
Saline and Betadine used for 1 week with **no reduction in infection or signs of healing.**

SilverStream Medical

PSEUDOMONAS INFECTION ELIMINATION IN AN ELECTRIC BURN PATIENT

SilverStream Treatment :

After surgical debridement, **100ml SilverStream** was used daily for **3 weeks.**

No. of 250 ml SilverStream Bottles Used: **3**

BEFORE SILVERSTREAM WEEK 0

AFTER SILVERSTREAM – WEEK 2

AFTER SILVERSTREAM – WEEK 3

Doctor Speaks: ”

A very mild solution for treatment of burns, which did not affect the surrounding granulation tissue and helped in quick healing.

Wound Characteristics	Week 0	Week 3
Wound Size	55 cm^2	Skin Grafting done
Signs of Infection	Yes	No
Granulation Tissue	No, 0%	Yes, skin grafting done
Non-viable Tissue	Yes, 30%	No. 0%

SilverStream Medical

11

A Domestic Burn Wound (age of patient: 4 years)

By Fullife Healthcare

Place: Kenya

Age of wound: 2 years

Sex: Male

Age of patient: 4 years

Type of Wound: Burn wound

Wound Condition before SilverStream:

Highly infectious chronic burn wound with sepsis and a lot of slime and slough with a foul odor.

Previous treatment used:

Conventional wound dressings, skin graft done but it failed due to the underlying infection.

SilverStream Treatment :

Application and Dressing: 5 dressings done over 3 weeks after which the infection was cleared, and the wound was grafted successfully.

Wound presented well granulation and looked clean after which successful skin grafting was done and the patient was discharged.

BEFORE SILVERSTREAM

AFTER SILVERSTREAM

12

Scald Burn Wound (age of patient: 6 years)

By Fullife Healthcare

Place: Kenya

Study Initiated on: October 2023

Age of wound: 1 year

Sex: Male

Age of patient: 6 years

Type of Wound: Burn wound

Wound Condition before SilverStream:

The wound was full of slime, slough and extreme necrotic tissue making it highly infectious.

Previous treatment used:

Conventional wound dressings.

SilverStream Treatment :

Application and Dressing: Dressings done with 2 ml Qurion (SilverStream Brand) solution per cm^2

The wound was clean and well granulated. Successful grafting was done and the patient was discharged.

BEFORE SILVERSTREAM

AFTER SILVERSTREAM

SilverStream Medical

Scald Burn Wound age of patient: 2.7 years)

By Fullife Healthcare

Place: Kenya

Age of wound: 3 month

Sex: Male

Age of patient: 2 years, 7 month old

Type of Wound: Burn wound

Wound Condition before SilverStream:

The wound was full of slime, slough and extreme necrotic tissue making it highly infectious with septic.

Previous treatment used:

Conventional wound dressings

SilverStream Treatment :

Application and Dressing: Dressings done with 2 ml Qurion (SilverStream Brand) solution per cm^2

The wound area was well granulated with no signs of infection and was ready for grafting.

BEFORE SILVERSTREAM

AFTER SILVERSTREAM

14

A Domestic Burn Wound (age of patient: 10 years)

By Fullife Healthcare

Place: Kenya

Age of wound: 1 year

Sex: Female

Age of patient: 4 years

Type of Wound: Burn wound

Wound Condition before SilverStream:
Slimy exudating wound with slough and biofilm making it highly infectious in nature.

Previous treatment used:
Conventional wound dressings

SilverStream Treatment :

Application and Dressing: Dressings done with 2 ml Qurion (SilverStream Brand) solution per cm^2 per day.

Clean wound bed with a good granulation tissue observed and wound been ready for grafting.

BEFORE SILVERSTREAM

AFTER SILVERSTREAM

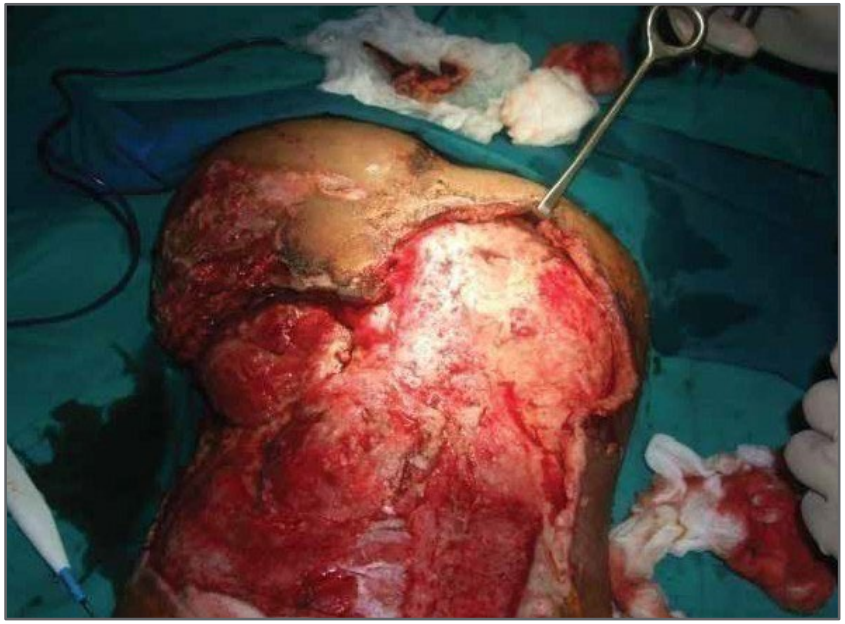
Trauma Cases & Skin Grafting

SilverStream Medical

DEGLOVING INJURY OF THE BACK

By Dr.Sandeep Naphade
Place: Pune, India
Study Initiated on: 05/2013
Age of Patient: 16 yrs
Sex: Male
Type of Wound: Back Degloved
Age of Wound: 1 week

BEFORE SILVERSTREAM WEEK 0



Wound Condition before SilverStream:
16 year old kid with a **trauma induced (degloving) injury** on the back.
Heavily infected with 80% back exposed and **non viable tissue** in the wound.

Previous treatment used:
Wall suction with regular **Saline cleansing and Surgical debridement** showed **no response** over the 1 week period.

SilverStream Medical

DEGLOVING INJURY OF THE BACK

SilverStream Treatment :

75 ml of SilverStream was used every **alternate day for 3 weeks.**
Sustained reduction in infection observed overtime.
Skin grafting was done post elimination of the infection.

No. of 250 ml SilverStream Bottles Used: **3**

BEFORE SILVERSTREAM WEEK 0

AFTER SILVERSTREAM WEEK 1 AFTER GRAFTING

AFTER SILVERSTREAM WEEK 3 AFTER GRAFTING

Wound Characteristics	Week 0	Week 3
Wound Size	80% Back exposed	Skin grafting done
Signs of Infection	Yes	No
Granulation Tissue	No, 0%	Yes, 90%
Non-viable Tissue	Yes, 100%	No, 0%

Doctor Speaks:

A very good, patient friendly wound cleanser. Helped wounds heal faster and made it ready for grafting.

16

CHRONIC TRAUMA CASE WITH SEVERE INFECTION ON THE LEG

By Dr. Anirudh Mene
Place: Bhilai, India
Study Initiated on: 05/2013
Age of Patient: 45 yrs
Sex: Male
Type of Wound: Trauma Injury due to Road Accident
Age of Wound: 1 week

BEFORE SILVERSTREAM - WEEK 0

Wound Condition before SilverStream:

Road accident case with **multiple open factures** was put on **external fixtures.** The **wound developed infection** and the **bone was exposed with poor prognosis and no visible signs of healing.**

Previous treatment used:

Treated with NPWT, but due to external fixtures, **closure could not be achieved.**

In addition, due to **heavy infection, no visible effect of NPWT seen.**

SilverStream Medical

CHRONIC TRAUMA CASE WITH SEVERE INFECTION ON THE LEG

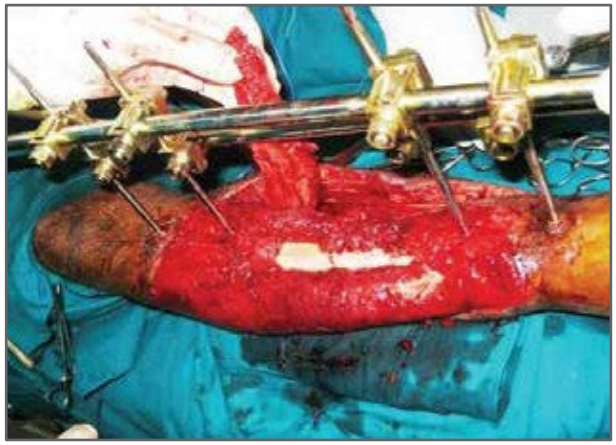
SilverStream Treatment :

~ 50 ml of SilverStream was used daily for **2 weeks. Substantial wound healing enabled skin grafting to be performed after 2 weeks.**

No. of 250 ml Silver Stream Bottles Used: **3**

BEFORE SILVERSTREAM WEEK 0

AFTER SILVERSTREAM – WEEK 1



AFTER SILVERSTREAM – WEEK 2

Doctor Speaks:

Very effective against infections. helped wounds heal faster and facilitated greater acceptance of Skin Grafts.

Wound Characteristics	Week 0	Week 2
Wound Size	75% of left leg exposed & wounded	Skin grafting done
Signs of Infection	Yes	No
Granulation Tissue	Yes, 10%	Yes, skin grafting done.
Non-viable Tissue	Yes, 90%	No. 0%

17

TRAUMA CASE OF AMPUTATED STUMP

By Dr. Sandeep Naphade

Place: Pune, India

Study Initiated on: 06/2013

Age of Patient: 42 yrs

Sex: Male

Type of Wound: Amputated Stump

Age of Wound: 0 week

BEFORE SILVERSTREAM WEEK 0

Wound Condition before SilverStream:

Trauma wound, leading to **amputation** of left foot.
Heavily infected with **necrotic tissue and debris all over the wound with oozing.**

Previous treatment used:

SilverStream used from day 1 after **surgical debridement.**

SilverStream Medical

TRAUMA CASE OF AMPUTATED STUMP

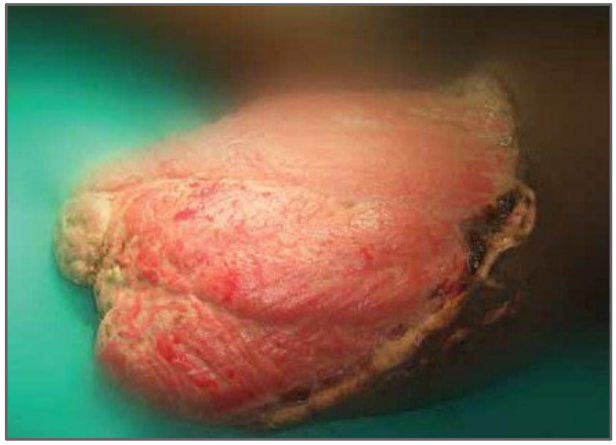
SilverStream Treatment :

20 ml SilverStream treatment **once daily for 2 weeks.**
Infection was cleared completely with visible granulation tissue.
Followed by Skin Grafting.

No. of 250 ml SilverStream Bottles Used: 1

BEFORE SILVERSTREAM WEEK 0

AFTER SILVERSTREAM – WEEK 1



AFTER SILVERSTREAM - WEEK 2 AFTER GRAFTING

Doctor Speaks: ”

A very good, patient friendly wound cleanser. Helped wounds heal faster and made it ready for grafting.

Wound Characteristics	Week 0	Week 2
Wound Size	20 cm^2	Skin Grafting done
Signs of Infection	Yes, 100%	NO
Granulation Tissue	No, 0%	Yes, 90%
Non-viable Tissue	Yes, 100%	No. 10%

SilverStream Medical

TRAUMA CASE WITH INFECTED RIGHT LEG

By Dr. Sandeep Naphade

Place: Pune, India

Study Initiated on: 06/2013

Age of Patient: 42 yrs

Sex: Male

Type of Wound: Trauma wound leading to exposure of facia.

Age of Wound: 0 week

BEFORE SILVERSTREAM WEEK 0

Wound Condition before SilverStream:

Facia of the leg exposed due to **severe trauma injury. Heavy signs of infection** present with **pus, debris and non-viable tissue.**

Previous treatment used:

SilverStream used from day 1 after **surgical debridement.**

SilverStream Medical

TRAUMA CASE WITH INFECTED RIGHT LEG

SilverStream Treatment :

20 ml of SilverStream was used **once daily for 2 weeks.**
The **debris and non – viable tissue cleared** with time and **signs of infection reduced.** This was followed by **Skin Grafting.**

No. of 250 ml SilverStream Bottles Used: **1**

BEFORE SILVERSTREAM WEEK 0

AFTER SILVERSTREAM - WEEK 2 AFTER GRAFTING

Doctor Speaks: ”

A very good, patient friendly wound cleanser. Helped wounds heal faster and made it ready for grafting.

Wound Characteristics	Week 0	Week 2
Wound Size	30 cm^2	Skin Grafting done
Signs of Infection	Yes, 100%	No
Granulation Tissue	No, 0%	Yes, 90%
Non-viable Tissue	Yes, 100%	No. 0%

SilverStream Medical

CHRONIC HIP INFECTION POST TRAUMA INJURY

By Dr. Bhaumik Bhayani
Place: Rajkot, India
Study Initiated on: 02/2012
Age of Patient: 58 yrs
Sex: Female
Type of Wound: Chronic Infection due to Trauma
Age of Wound: 16 weeks

BEFORE SILVERSTREAM WEEK 0

Wound Condition before SilverStream:
Severely infected injury in the **right hip region extending towards the thigh.** Patient met with an accident 1 year ago and the **infection developed 8 months after the treatment due to poor hygiene conditions.**

Previous treatment used:
2 major debridement + 1 minor debridement performed **under anesthesia** with daily **Betadine dressings and oral anti-bacterials.**

SilverStream Medical

CHRONIC HIP INFECTION POST TRAUMA INJURY

SilverStream Treatment :

~80 ml of SilverStream was used per treatment, **thrice a week for 3 weeks.**
Cessation of infection since 1st application of SilverStream observed.
Skin grafting successfully performed at the end of 3 weeks.

No. of 250 ml SilverStream Bottles Used: **3**

BEFORE SILVERSTREAM WEEK 0

AFTER SILVERSTREAM – WEEK 1.5

AFTER SILVERSTREAM – WEEK 3

Doctor Speaks:

It seemed to be very effective topical antiseptic.

Wound Characteristics	Week 0	Week 3
Wound Size	Buttock + 75% area of right thigh Signs of Infection - Yes	Skin Grafting done
Signs of Infection	Yes	No
Granulation Tissue	No, 0%	Yes, 100% skin grafting done
Non-viable Tissue	Yes, 10%	No. 0%

Others

25

NECROTIZING SOFT TISSUE INFECTION AND MULTIPLE BOWEL PERFORATIONS AFTER LIPOSUCTION PROCEDURE

By Cernica Chausha Weitman and Miklosh Balla
Place: Hadassah Medical Center, Jerusalem, Israel
Study Initiated on: 8/2022
Presented at EWMA, May 2023, Milan, Italy
Age of Patient: 43 yrs
Sex: Female
Age of Wound: 5 days after abdominal wall and bilateral thighs liposuction

Type of Wound:

Necrotizing Soft Tissue Infection and multiple bowel perforations after Liposuction Procedure.

Small intestine perforations

Septic shock + acute renal failure Admission to ICU (mechanical ventilation and vasopressor support)

BEFORE SILVERSTREAM

SilverStream Medical

NECROTIZING SOFT TISSUE INFECTION AND MULTIPLE BOWEL PERFORATIONS AFTER LIPOSUCTION PROCEDURE

SilverStream Treatment :

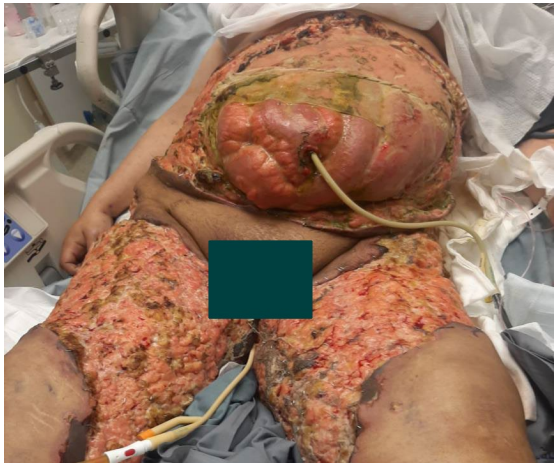
No. of 250 ml Silver Stream
and alginogel enzyme
SS Bottles Used: **21**

~250 ml of SilverStream was used per day, **3 weeks as a wound bed preparation for skin graft.**

Infection reduction was observed with **good growth of granulation tissues covering area even before skin grafting.**

13 skin graft surgeries performed successfully during the treatment.

BEFORE SILVERSTREAM WEEK 0



AFTER SILVERSTREAM BEFORE SKIN GRAFT

HEALING PROCESS AFTER SKIN GRAFT

Discharge after 5 month of hospitalization:
3 month in ICU
2 month in General Surgery unit

26

SilverStream Medical

SILVERSTREAM AND NEGATIVE PRESSURE VACUUM: RESECTION OF PILONIDAL DISEASE

By: Ido Mizrahi, MD, Noemie Nalbandian, RN MPH
Place: Hadassah Hebrew University Medical Center, Israel

Aim

To describe our results with a novel approach **using SilverStream Solution and Negative Pressure Vacuum system for secondary intent wound healing after pilonidal surgery**

Methods

We hereby describe two cases of complicated pilonidal surgery.

- **Patient #1** had a large pilonidal sinus projecting to his right lower buttock. **After complete excision of his disease he was treated with Negative Pressure Vacuum and SilverStream**. His wound was completely closed 8 weeks after surgery.
- **Patient #2** was treated with **SilverStream** alone with complete wound closure 7 weeks after surgery.

Introduction

Pilonidal disease presents with a wide range of symptoms and multiple treatment options exist.

Resection of the disease with primary closure might result with wound infection, delayed wound healing, and recurrence. Hence, surgical resection with secondary intent wound healing is often performed.

Silverstream Solution and Negative Pressure Vacuum system offers rapid wound healing while avoiding wound complications.

No complication was recorded. Both patients reported minimal pain after surgery

Reference List

SilverStream Medical

1. Kumar, A., Bajaj, S. S., & Bajaj, J. K. (2022). "A Comparative Study of Efficacy of Silver Stream versus Povidone Iodine in Healing Diabetic Ulcers." International Surgery Journal, 9(6), Page Range. DOI: https://doi.org/10.18203/2349-2902.isj20221407
2. Bara, B. K., Pattanayak, S. P., Malla, T. K., & Behera, M. K. (2017). "A Study of Silver Nitrate Solution in Dressing of Diabetic Foot Ulcer." Journal of Evidence-Based Medicine and Healthcare, 4(73), 4336-4338. DOI: https://doi.org/10.18410/jebmh/2017/863. Affiliation: National Institute of Technology Rourkela.
3. Sukanya, C., Penugonda, A., Gandikota, V., Anupama, C., Reddy, G. Harsha Vardhan. (2020). "Role of Silver Nitrate Solution Dressings Over Conventional Dressings in Chronic Lower Limb Ulcers – A Prospective Study." IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), Volume 19, Issue 7 Ser.3 (July 2020), PP 10-14. e-ISSN: 2279-0853, p-ISSN: 2279-0861. Website: www.iosrjournals.org.
4. Mishra, B., Sharma, D. J., Arora, C. (2021). "Comparative Study of the Efficacy of Ionic Silver Solution and Super Oxidized Solution in the Management of Chronic Wounds." Medical Journal Armed Forces India, 79(2), May 2021. DOI: https://doi.org/10.1016/j.mjafi.2021.03.002. Affiliation: Bharat Mishra - Army Hospital (Research & Referral) Delhi, Dev Jyoti Sharma - Command Hospital Western Command, Chandimandir, Chetna Arora.
5. Chouhan, V. (2016). "Qivas Therapy for Treatment of Implant Associated MDR Bacterial Infection." Journal of Orthopaedic Case Reports, 6(2), 69–71. doi: 10.13107/jocr.2250-0685.440
6. Muralidharan, R., & Venkatachalam, K. (2019). A prospective study of the effectiveness of Ilizarov ring fixator in the surgical treatment of tibial fracture infective non-unions in adults. International Journal of Orthopaedics and Surgery, 5(3), 418-425. https://doi.org/10.22271/ortho.2019.v5.i3g.1565.
7. Prasad, S., & Zaveri, G. (2019). Surgical Management of Surgical Site Infections in Orthopaedics. Journal of Clinical Orthopaedics, 4(2), 17-25. doi:10.13107/jcorth.2456-6993.2018.231
8. Kumar, A., & Sinha, V. K. (2018). Comparative study of EUSOL and SilverStream in healing pressure sores in traumatic spinal cord injury patients. International Journal of Orthopaedics, 4(1), DOI: https://doi.org/10.22271/ortho.2018.v4.i1d.33.
9. Fullife Healthcare Pvt. Ltd. (2015). Case study of a patient suffering from Venous Insufficiency on the right leg treated with Qurion and Jet Force. Study initiated on 27.06.2015.
10. Park, N., Gu, G., Yao, M., Ring, J., Driver, V. "Effect of Silver-ion Solution on Chronic Ulcers." Clinical Research Limb Preservation and Wound Care, Department of Surgery, Boston University Medical Center and Boston University School of Medicine, USA. Link to download
11. Johnson-Arbor, K. "Efficacy of a 0.01% Silver Nitrate Solution Used for Wound Irrigation." Department of Emergency Medicine and Traumatology, Wound Healing and Hyperbaric Medicine Center, Hartford Hospital; Hartford, CT, USA. Link to download
12. Powers, J. G., Morton, L. M., Phillips, T. J. "Silver-Ion-Containing Solution Aids in Chronic Wound Healing." Department of Dermatology, Boston University, Boston, Massachusetts, USA. Link to download
13. Serena, T. E. "SilverStream Significantly Affects Biomaterial Reduction." St. Vincent Hospital, Erie, PA, USA. Link to download
14. Saucier, D., & Milne, C. T. (2012). Use of an Ionic Topical Silver Solution with Menthol as a Wound Cleansing Agent in Venous Ulcerations. Presented at AWC Spring 2012. Connecticut Clinical Nursing Associates, LLC, Bristol, Connecticut.
15. Weitman Cernica, C. (2021). "Preventing Ulcers in Bullous Erysipelas: Clinical Study on the Efficacy of Topical SilverStream Treatment, Including Post-Hospitalization Supervision." Wound-care coordinator, Dermatology Department, Hadassah Hebrew University Medical Center, Jerusalem, Israel. Link do download
16. Landsman, A. (2012). SilverStream® Wound Optimizing Rinse for the Treatment of Mildly Infected and Non-Progressing Diabetic Foot Ulcers and Venous Leg Ulcers. Chief, Division of Podiatric Surgery, Cambridge Health Alliance, and Harvard Medical School, Cambridge, MA, USA. (Case Study Poster)
17. Landsman, A. (Submitted for publication). Stimulation of Quiescent and Mildly Infected Diabetic Foot and Venous Ulcers using a Wound Optimizing Irrigant. International Wound Journal. Link to download
18. Saucier, D., & Milne, C. T. (May 2012). "Use of an Ionic Topical Silver Solution with Menthol as a Wound Cleansing Agent in Venous Ulcerations." Journal of Wound Ostomy and Continence Nursing, 39(3), S12-S12
19. Weitman, C. C., & Balla, M. (2022). "Necrotizing Soft Tissue Infection and Multiple Bowel Perforations after Liposuction Procedure." Hadassah Medical Center, Jerusalem, Israel. Poster presented at EWMA, May 2023, Milan,
20. Venkateshwar Reddy Vaddula, Rajendraprasad Kathula, Harshitha Kathula. Management of Diabetic Foot Ulcer using Silver Nitrate in Liquid Form - A Prospective Interventional Study. IAIM, 2020; 7(1): 61-65.
21. Jathanna, S. E. (2016). A Comparative Study of Topical Solution of Ionic Silver Versus Conventional Dressing in Treatment of Second Degree Burns. (Doctoral dissertation, Rajiv Gandhi University of Health Sciences, India). ProQuest Dissertations Publishing, 30579348. Available at:Link

A Patented Products of: Silverstream Medical Ltd.

WWW.SILVERSTREAMMED.COM