

Challenges in Management of a Deaf and Dumb Patient with Venous Ulcer

Barath Kumar Singh P¹, Ravi Kumar Chittoria²

How to cite this article:

Barath Kumar Singh P¹, Ravi Kumar Chittoria/Challenges in Management of a Deaf and Dumb Patient with Venous Ulcer/RFP J ENT Allied Sci 2022;7(2):67-72.

Abstract

The most common cause of lower extremity ulcers is by far venous problems that result in a persistent rise in venous pressure. Venous ulceration, which accounts for 80% of lower extremity ulcerations, is the most severe and disabling consequence of chronic venous insufficiency in the lower limbs. Due to the return of varicosities and the patient's non-compliance with the treatment, venous ulcers frequently recur. Patients who are congenitally deaf or dumb and scheduled for plastic surgery are cases that call for extra consideration and care. The level of preoperative training that is necessary can be determined by conducting a preoperative assessment of the patient's communication skills, educational background, and fundamental comprehension capacity. In order to develop successful communication between the patient and the healthcare professional, it may be helpful to hire a sign language or communication specialist. The healing process can be sped up by early mobilisation, careful use of sedatives and analgesics in the postoperative phase, and allowing a family member to visit and converse with the patient. This case study describes the treatment of a patient who is deaf and dumb and is having surgery for venous insufficiency.

Keywords: Venousulcer; Deaf; Dumb; Challenges.

INTRODUCTION

Perioperative management of deaf and dumb patients can be a challenging task. Proper care should start before surgery in order to ensure a smooth postoperative recovery. A communication professional must be involved in order to fully comprehend the patient's demands and teach the

patient how to follow instructions. To keep the patient pain free and comfortable, it is crucial to utilize sedatives and analgesics carefully. Following surgery, the patient should be maintained awake long enough to comprehend the body's internal needs and to respond appropriately to outside stimuli. Better postoperative care can be provided with adequate preoperative planning and coordinated team efforts involving specialists. One of the frequent side effects of venous insufficiency illnesses is venous ulcers. Vein ulcers, often referred to as stasis, insufficiency, or varicose ulcers, are brought on by malfunctioning venous valves, which raise vein pressure.¹ These often happen on the distal leg's medial or lateral side. Venous insufficiency, or the consequent venous hypertension, causes blood to pool when it is not pushed back towards the heart as effectively. Due to their chronic nature and recurrence, they are challenging to control. Healthcare professionals

Author Affiliation: ¹Senior Resident, Department of Plastic Surgery ²Professor & Registrar (Academic) Head of IT Wing and Telemedicine, Department of Plastic Surgery & Telemedicine, JIPMER, Pondicherry 605006, India.

Corresponding Author: Ravi Kumar Chittoria, Professor & Registrar (Academic) Head of IT Wing and Telemedicine, Department of Plastic Surgery & Telemedicine, JIPMER, Pondicherry 605006, India.

E-mail: drchittoria@yahoo.com

Received on: 29.09.2022

Accepted on: 25.10.2022

are burdened by chronic wounds since many of them take weeks or months to heal, frequently requiring complicated treatment plans and a multidisciplinary approach. In our article discusses about the challenges of managing a deaf and dumb patient with venous ulcer.

MATERIAL AND METHODS

This study was conducted in the Department of Plastic Surgery in a tertiary care institute. Informed consent was obtained from the patient after explaining the patient through videos and picture

format along the sign language health care staff (fig. 1).

Department scientific committee approval was obtained. It is a single center, non-randomized, non-controlled study. A 50 years old lady, who was deaf and dumb since birth, hailing from Tamil Nadu, with no known co-morbidities was admitted with infected ulcer over the left leg. On assessment, she was found to have incompetent Saphenofemoral junction of the left lower limb. The patient was initially treated with conventional dressing. As the ulcer did not show any evidence of healing and was infected (fig. 2).



Fig. 1: Resident doctor explaining the patient and relative along with the sign language expert healthcare staff about the treatment plan



Fig. 2: Wound at presentation



Figure 4. Low level laser therapy application

Infection was managed with local antimicrobials & antibiotics according to culture sensitivity. Wound bed was prepared in accordance with TIME concept mentioned in the guidelines, the ulcer was serially assessed and documented according to bates - Jensen wound assessment tool.² We used regenerative methods like autologous platelet rich plasma therapy (fig. 3), low level laser therapy (fig. 4) vitamin D granule and sucralfate therapy for wound bed preparation. In addition, we used heterografting of wound with collagento supply growth factors to the raw area, in accordance with SWCR guidelines were done to aid granulation of raw area. As wound was wet in nature, moisture control was done using negative pressure wound therapy (fig. 5). His wound bed gradually improved, in the meantime incompetent saphenofemoral junction and multiple incompetent perforators were ligated. Once wound bed and patient was ready for reconstruction, clinical decision was taken to reconstruct with a skin graft (fig. 6).



Fig. 5: Negative pressure wound therapy



Fig. 3: Autologous platelet rich plasma application



Fig. 6: Split skin grafting done

The patients' husband and son had normal hearing and speech functions. The preoperative visit focused on educating and interacting with

the patient and her husband. Due to the poor educational background of patient's husband and other relatives, the patient was explained about the surgical procedure and anticipated postoperative course by writing and making pictures, showing videos to explain the patient. The patient was taught to express pain by showing the visual analogue scale (VAS). The formal preanesthetic check-up revealed no significant co-morbidities. On the day of surgery, the patient was briefed about the procedure and the postoperative course in the presence of his wife and family members.

RESULTS

Since the patient cannot communicate their issues, clinical and objective assessment should be taken. The diagnosis, surgical strategy, and postoperative care are all explained to the patient's attendant and any family members. Family members should be given more time with the patient after they are stable. The amount of sedative and analgesic medication given to patients after surgery was adequate so that they can participate fully in their recovery. Our patient can't read or interpret written materials, thus communication takes place through videos and pictures. With good graft take, the wound healed well (fig. 7). Patient was successfully discharged.



Fig. 7: Healed wound at the time of discharge

DISCUSSION

WHO estimates that 278 million individuals worldwide suffer from a disabling hearing impairment.³ About 5 million persons in India have considerable auditory loss, according to data from the 2011 Census of India on disabilities.³

According to research, hearing loss is the second most frequent reason for impairment. Hearing loss that is congenital is present from birth. It may run in the family, be brought on by fetal anomalies, or be brought on by birth trauma. Congenital hearing loss has a genetic component in more than 50% of cases. This component is primarily autosomal recessive inheritance, although it can also be autosomal dominant or X-linked.⁴ While 20% of congenital deafness is related with different syndromes as Alports, Crouzon, Usher, Down, Treacher Collins, Pendred, and Stickler syndrome, about 80% of congenital deafness is non-syndromic.

Three levels of deafness have been identified in the literature: sudden onset deafness, hearing loss following speech development, and deafness at birth. The individuals in the latter group are also prelingually deaf.⁵ The deaf population is at danger of receiving insufficient medical attention and health related information due to communication barriers between the deaf individual and medical personnel. Few healthcare professionals have the necessary experience to handle patients who are physically challenged. The perioperative management of congenitally deaf and dumb individuals admitted for any surgery is exceedingly difficult. In our case, videos and photographs were used to explain the surgery and postoperative care to the patient and patient family due to the patient's weak educational background and the patient's husband and other relatives' subpar understanding. The patient can be taught to convey pain by discussing VAS, and the sign language specialist can also be used to describe the deep breathing exercises and lung expansion maneuver.

Poor postoperative pain assessment and management can have severe impacts on the patients, including anxiety, insomnia problems, irritability, aggression, and unneeded stress and suffering.⁶ Additionally, to these physiological effects, post-operative pain can cause heart rate and blood pressure to rise, delayed stomach emptying those results in nausea, vomiting, and paralytic ileus. Chest infections might develop if you don't cough and breathe deeply. All of these factors taken together may cause delayed mobilization, extended hospital stays, and costly consequences. To ensure that pain is adequately controlled, an accurate assessment of postoperative pain is therefore crucial. In this particular group of patients, it could be challenging to subjectively assess pain.⁷

Due to the usual occurrence of post-operative delirium following surgery, controlling delirium or psychosis in this patient could be exceedingly challenging; thus, all precautions were taken to prevent delirium or psychosis. Sedatives and analgesics were administered sparingly after surgery to keep the patient at ease and awake enough to grasp and express the issues.⁸

For patients with permanent hearing loss and deaf mutism, cochlear implants are a viable treatment alternative. Cochlear implants are now the sole recognized and established treatment option for both pediatric and adult deafness. However, early detection of hearing loss and the placement of a cochlear implant may indicate a rapid improvement in listening abilities.⁹

Finally, we must keep in mind that achieving greatness in care is not possible without the assistance of skilled healthcare professionals. Anesthesiologists, who are regarded as perioperative physicians, can affect the perioperative outcome through preoperative optimization, active patient education, appropriate anesthetic technique selection, prompt implementation of preventive measures to lessen post-operative adverse events, and perioperative rehabilitation programs. When caring for patients, especially those who are weak and unable to speak for themselves, nurses should be morally, ethically, and professionally committed to their work. For the best therapy and pain alleviation, these unique groups of patients need ongoing assessment and the proper care, unlike other patients.¹⁰

Venous ulcers are more likely to come again. Prior to surgery, it's important to assess and make adjustments for physical factors that could hinder surgical wound healing, such as the availability of equipment for the prevention and treatment of venous ulcers, testing of tolerance for care in the desired position, and factors related to diabetes, malnutrition, and long-term recurrence.¹¹ Once a venous ulcer has healed, suitable preventative measures should be performed. Along with routine clinical examinations, patient education about skin care, limb elevation, and exercise, a carefully chosen and accurately calibrated compression stocking is helpful in preventing recurrence. Saphenofemoral junction ligation, perforation ligation, and stripping of superficial veins, either through endovascular or open surgery, are the main treatments for venous insufficiency.¹² Compression stockings are used in a conservative manner to treat patients who

are not healthy enough or not good candidates for surgery.

CONCLUSION

The treatment of chronic venous ulcers is a therapeutic challenge. The perioperative management of congenitally deaf and dumb patients posted for high risk surgery is difficult. The successful outcome depends on upon proper planning and a coordinated team effort. The following recommendations can help in optimizing the management like preoperative assessment of the patient including their understanding and communication skill, Early extubation, early removal of catheters and tubings, and early mobilization should be encouraged to prevent postoperative psychosis. The objective assessment of pain and effective pain control protocol should be done. Properly trained nurses and paramedical staff should be engaged in the care of these patients.

REFERENCES

1. Briggs M, Nelson EA. Topical agents or dressings for pain in venous leg ulcers. *Cochrane Database Syst Rev*. 2003;1:CD001177.
2. Nelzén O, Bergqvist D, Lindhagen A. Long-term prognosis for patients with chronic leg ulcers: a prospective cohort study. *Eur J VascEndovasc Surg*. 1997;13(5):500-508.
3. Garg S, Chadha S, Malhotra S, Agarwal AK. Deafness: Burden, prevention and control in India. *Natl Med J India*. 2009;22:79-81.
4. Hilgert N, Smith RJ, Van Camp G. Forty-six genes causing nonsyndromic hearing impairment: Which ones should be analyzed in DNA diagnostics? *Mutat Res*. 2009;681:189-96.
5. Nance WE. The genetics of deafness. *Ment Retard DevDisabil Res Rev*. 2003;9:109-19.
6. Palese A, Salvador L, Cozzi D. One-dimensional scales for pain evaluation adopted in Italian nursing practice: Giving preference to deaf patients. *J Nurs Meas*. 2011;19:91-104.
7. Margellos-Anast H, Estarzi M, Kaufman G. Cardiovascular disease knowledge among culturally Deaf patients in Chicago. *Prev Med*. 2006;42:235-9.
8. Sjöström B, Dahlgren LO, Haljamäe H. Strategies used in post-operative pain assessment and their clinical accuracy. *J ClinNurs*. 2000;9:111-8.
9. Samson RH, Showalter DP. Stockings and the prevention of recurrent venous ulcers. *Dermatol Surg*. 1996;22(4):373-376.

10. Abbade LP, Lastória S. Venous ulcer: epidemiology, physiopathology, diagnosis and treatment. *Int J Dermatol*. 2005;44(6):449-456.
 11. Callam MJ, Ruckley CV, Harper DR, Dale JJ. Chronic ulceration of the leg: extent of the problem and provision of care. *Br Med J (Clin Res Ed)*. 1985;290(6485):1855-1856.
 12. Ruckley CV. Socioeconomic impact of chronic venous insufficiency and leg ulcers. *Angiology*. 1997;48(1):67-69.
-