



SUBCUTANEOUS PORT INFECTION: PRESENTATION OF A CLINICAL CASE

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ABSTRACT

Objectives: Describe uses, purpose, technique, possible complications, of the placement of a Subcutaneous Port.

Method: A retrospective study was performed in a pediatric oncology patient with Subcutaneous Port infection, who underwent clinical-surgical treatment.

Result: A 12-year-old girl with a diagnosis of Acute Lymphoblastic Leukemia carrying a Subcutaneous Port on the left side, presented a herpetic outbreak in the left hemithorax causing infection of the Subcutaneous Port with site necrosis requiring clinical treatment (pediatric infectology) and surgical treatment (pediatric oncological surgery) and plastic surgery).

Conclusion: The placement of fully implantable central venous access catheters improve the style and quality of life of patients who require prolonged treatments. Yugulo-Subclavian confluent ultrasound guidance and puncture offers a high success rate and is the safest technique today.

The existence of a trained medical team for the realization, use and solution of possible complications is important.

KEYWORDS : Catheter, Implantable, Leukemia.

INTRODUCTION

Implantable Catheters also called Subcutaneous Ports or Fully Implantable Vascular Access Devices are devices created to improve the style and quality of life of patients who need prolonged invasive treatments such as cancer patients for the administration of Chemotherapy, antibiotics, transfusions blood.

Currently the use of special ultrasound equipment has facilitated and improved the technique for central line puncture for the implantation of these devices.

However, this does not mean that we are exempt from complications ranging from pneumothorax, hemothorax, air embolism, arterial puncture, arrhythmia, pericardial tamponade, brachial plexus injury, etc., at the time of surgery and even surgical wound infections, pathway obstruction in the post-surgery.

METHODOLOGY

A retrospective study was performed in a pediatric oncology

patient with Subcutaneous Port infection, who underwent clinical-surgical treatment.

The information obtained rests on the Word and Image computer system of those who carried out the study.

CLINICAL CASE PRESENTATION

A 12-year-old female patient who had a confirmed diagnosis of Acute Lymphoblastic Leukemia decided to place a Subcutaneous Port to start Chemotherapeutic treatment. After the same patient was placed, he suffered a herpetic outbreak at the thoracic region, compromising the surgical area of Puerto.

Patient transfer was made from a third level hospital to a fourth level hospital where we received an awake, allergic patient with a noticeable herpetic outbreak at the level of the left hemithorax associated with a necrotic area of approximately 10 centimeters in diameter, extending from the mid-clavicular region to posterior axillary line.



Image 1: Herpetic Outbreak And Subcutaneous Port Site Necrosis



Image 2: Third Day Of Clinical Treatment And Post-removal Of The Subcutaneous Port

Subcutaneous Port was removed to avoid and / or decrease the risk of infection and associated complications; clinical treatment was started by the pediatric infectology area; it was decided to perform a Thoracic Necrosectomy.



Image 3: Thoracic Post-necrosectomy

Se continuó con tratamiento clínico hasta los 21 días donde se evidenció remisión de enfermedad infecciosa; durante este tiempo se realizaron además 3 limpiezas quirúrgicas más del sitio de infección logrando esterilizar el área.

En conjunto con Área de Cirugía Plástica se programó y realizó colgajo anterolateral de muslo pediculado para cobertura de defecto torácico el mismo que se mantuvo vitalizado hasta su alta por parte del team quirúrgico.



Image 4: Final Result Of Graft Performed

DISCUSSION

Subcutaneous Ports are devices placed with the aim of guaranteeing long-term vascular access for the administration of chemotherapy, antibiotics, and parenteral nutrition in both children and adults.

There are different techniques and locations to perform the vascular access procedure, all at risk for the duration of the procedure; Recent studies demonstrate echo supraclavicular puncture directed at the confluent Yugulo-Subclavian region, preferably right, with 100% efficacy in venipuncture, making it the safest technique for the placement of these fully implantable devices; however there are cases in which its use is contraindicated.

Once the Implantable Catheter has been placed, there are two types of complications: early and late.

Early: Hematomas, arterial puncture.

Delays: Thrombosis, catheter migration, catheter infection, drum pocket infection.

In the exposed case, a late complication was identified due to a herpes outbreak at the level of the left hemithorax, which caused an implantable catheter infection causing site necrosis requiring clinical-surgical treatment (with various surgeries) for its resolution.

CONCLUSION

Subcutaneous Ports are devices that guarantee the permeability of a central line for a long time for the administration of medication, chemotherapy treatment, parenteral nutrition in patients with catastrophic diseases such as cancer, and thus improve their style and quality of life.

There are different techniques for puncture and placement of venous catheters, however eco-directed supraclavicular puncture towards confluent Yugulo-Subclavian offers a high success rate and is a safe technique.

An adequate pre-surgical assessment is important to establish the technique, location, risks and possible trans and post-surgical complications; as well as having a trained medical team for the proper handling of the device and resolution of possible complications.

REFERENCES:

1. Colocación de dispositivos de acceso venoso central totalmente implantables guiados por ultrasonido: experiencia de tres años en pacientes pediátricos oncológicos. Revista Médica Vozandes Volumen 29, Número 1, 2018
2. An H, Ryu CG, Jung EJ, Kang HJ, Paik JH, Yang JH, Hwang DY. Insertion of totally implantable central venous access devices by surgeons. Ann Coloproctol 2015; 31: 63-67.
3. Burns S, Herbison GJ. Spinal accessory nerve injury as a complication of internal jugular vein cannulation. Ann Intern Med 1996; 125: 700.
4. Petersen J, Delaney JH, Brakstad MT, Rowbotham RK, Bagley Jr CM. Silicone venous access devices positioned with their tips high in the superior vena cava are more likely to malfunction. Am J Surg 1999; 178: 38-41
5. Kılıç S, Soyer T, Kamak I, Ciftçi AÖ, Tanyel FC, Senocak ME. Evaluation of the removal reasons of totally implantable venous devices in children: a retrospective study. Turk J Pediatr 2016; 58: 187-94.
6. Liberale G. Totally implantable vascular access device (TIVAD) placement: a modified technique that takes post-procedure aesthetic aspects into account. Support Care Cancer 2017; 25: 1137-40.
7. Faraj W, Zagal A, El-Beyrouthy O, Kutoubi A. Complete catheter disconnection and migration of an implantable venous access device: the disconnected cap sign. Ann Vasc Surg 2010; 24: 692.e11-e15.
8. Royle TJ, Davies RE, Gannon MX. Totally implantable venous access devices - 20 years' experience of implantation in cystic fibrosis patients. Ann R Coll Surg Engl 2008; 90: 679-84.