



The Cause of Nonhealing of Sac Incision after Implantable PICC-Port in a Lymphadenoma Patient with Blood Ophilia Syndrome

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Abstract

Implantation in the upper arm port has many advantages over PICC and chest wall port, such as no exposed catheter, no need to return to the hospital due to maintenance during the treatment interval, and no possible complications such as pneumothorax or hemothorax during chest wall port implantation. However, there are still no clear indications and contraindications until now, and beginners may have inadequate evaluating before port transplantation, leading to a series of consequences. In this article, the clinical data of the perioperative implantable PICC-Port of an NK/T cell lymphoma patient with blood Ophelia syndrome were presented, they are high fever, pre-treatment evaluation, and infusion of chemotherapy drugs etc. Information related to the patient' an arm circumference of 18 cm, a body mass index of only 14.14 and the catheter tip position at the 7th dorsal vertebra. After the operation, the patient's symptoms of hemophilia syndrome were not controlled, and the upper arm port pocket incision showed ischemic necrosis. Finally, the treatment was abandoned and discharged. The causes of the nonhealing incision were analyzed, it is mainly related to inadequate preoperative evaluation and no clear indications and contraindications; irregular replacement of incision dressing and poor treatment effect of basic diseases. Aiming to provide reference for relevant personnel in establishing and maintaining intravenous treatment access.

Keywords: PICC-Port; Incision not heal; Indications; Cachexia

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Received Date: 18 Jul 2024

Accepted Date: 31 Jul 2024

Published Date: 05 Aug 2024

Citation:

Wenfeng Chen. The Cause
of Nonhealing of Sac Incision
after Implantable PICC-Port in a
Lymphadenoma Patient with Blood
Ophilia Syndrome. *Clin Case Rep Int.*
2024; 8: 1696.

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Introduction

The peripheral vein implant infusion port, name as PICC-Port or upper arm port, is the delivery box mounted on the upper arm of the patient with the catheter tip located in the superior vena cava. Suitable for the infusion of various drugs, whether the foaming agent in chemotherapeutic drugs, or other strong acids and bases, vasoactive drugs or high osmotic pressure. At the same time, there is no scar on the upper chest to meet the needs of the population; compared to PICC [1,2], there is no catheter exposure and no resulting stigma [3]. There were no complications such as hemothorax, pneumothorax, or arterial injury during implantation [4]. During the gap period of therapy of patient with PICC-Port, if it is not necessary to return to the hospital for maintenance during the treatment, the patient has a high quality of life. If the time of patient with PICC-Port reaches a certain length, the cost is lower than that of PICC. Although the upper arm port has so many advantages, it is more and more widely used in clinical practice, but if the indications of the planting port is not well grasped or improper operation, there may be complications such as nonhealing incision. I encountered a patient with an incomplete pocket incision. In order to avoid the occurrence of similar conditions, the case is reported as follows.

Case Presentation

General data and preoperative management of the patients

A 22-year-old male patient was admitted on April 22nd, 2021 for August with diagnosed lymphoma, more than 3 months after radiotherapy and more than 1 month after the last chemotherapy for more than 10 days. The admission diagnoses were: 1. Hemophilia syndrome, 2. NK/T cell lymphoma, 3. Crohn's disease, and 4. Postsurgical status.

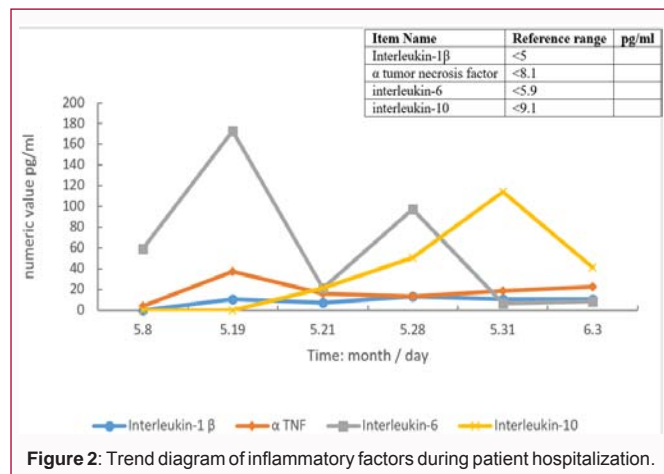
Pre-plant treatment is shown in Table 1.

Table 1: Disposal of patients prior to port transplantation.

Date	Time	Handle
4.22	16:00	Body temperature 39.1°C, oral ibuprofen, intravenous infusion of dexamethasone and piperacillin
	17:00	Sweat too much, so change your clothes
4.23	15:30	Bone marrow aspiration
	17:40	An intravenous infusion of etoposide was administered
4.24	12:00	An intravenous infusion, etoposide
4.25	10:49	An intravenous infusion, etoposide

Table 2: Local treatment of postoperative port.

Date	Clinical manifestation	Handle
4.25	Peripheral venous conditions were poor	Through the left upper arm to vein puncture implant arm infusion port
4.29	The puncture point is a little erythema	Routine disinfection for dressing replacement
5.1	The gauze dressing was oozing	Change place dressing under sterile operation
5.8	On postoperative day 13	Remove one suture in the middle of the incision under aseptic operation
5.11	The pouch incision becomes darker	The wound was split after removing the remaining suture
5.14	/	Change the dressing, and the incision is shown in Figure 1

**Figure 1:** Patient wound condition after line removal (19 days after operation).**Figure 2:** Trend diagram of inflammatory factors during patient hospitalization.

Relevant information of the upper arm port

At 15:00 on April 25th, the patient had received multiple cycles of chemotherapy and had poor peripheral vascular conditions, and had a fear of peripheral intravenous infusion of chemotherapy drugs. At present, the condition was still complicated, and the nature of the chemotherapy drugs to be used was not completely clear. After the confirmation of patients, family members, doctors and port planting staff, there are indications for implantation in the infusion port. On April 25th, 2021, arm infusion port implantation was performed on

the left upper arm under ultrasound guidance and local anesthesia [5]. During the operation, the characteristic P-wave was observed by IC-EKG, and the postoperative chest radiograph showed that the catheter tip was located at T6, the arm circumference of the patient was 18 cm, the implantation length was 40 cm, the tunnel length was 3 cm, a total was 43 cm, the patient's weight was 41 KG and the height was 169 cm, and the fascia was packed, but the skin was loose. The local treatment of the port incision is shown in Table 2 (Figure 1).

Patient data of upper arm port

Patients during hospitalization use etoposide and ifosfamide for a week, bone marrow suppression, oral mucosa ulcer, body temperature up to 41°C, after symptomatic treatment patients with inflammatory factors is still serious overweight (Figure 2), and then use etoposide, gemcitabine and oxaliplatin triple anti-tumor drugs, eventually patients with inflammation out-of-control, give up treatment and back home. The discharge diagnosis were: 1. Hemophilic syndrome, 2. NK/T cell lymphoma, 3. Crohn's disease, 4. Post-surgical status, 5. Primary biliary cholangitis, 6. Myelosuppression after chemotherapy, 7. Pneumonia, 8. Hypoproteinemia, 9. Cholecystitis.

Cause Analysis

The assessment of patients before planting the upper arm port not comprehensive

Despite the poor peripheral vascular condition, diagnosed as lymphoma with hemophilic syndrome, drug is complex and unknown nature, need central intravenous access device infusion, but the patient has received multiple cycles of chemotherapy, and poor treatment effect, when the patient was cachexia state, high fever, BMI only 14.14, arm circumference is only 18 cm, made into the port of the capsule, the operator feel fascia collapse, skin relaxation, subcutaneous soft tissue loss, not suitable for port [6].

Maintenance link operation not standard

The upper arm port maintainer used to be specialized in PICC maintenance personnel, in the maintenance formed the PICC spiral wipe disinfection skin habit, for the upper arm port patients change dressing, also mechanically using this technique disinfection, destroy the incision healing need to keep static environment.

The treatment effect of patients' basic diseases is poor, and the treatment drugs are not conducive to incision healing

After implantation, patients still have high fever, the use of cytotoxic drugs, fourth degree bone marrow suppression leads to whole blood cell decline and other malnutrition [7]. Is not conducive to the repair and healing of the patient's incision. Chemotherapeutic drugs not only have immunosuppressive effects, but also reduce collagen synthesis. Therefore, chemotherapeutic drugs should not be applied until at least 5 to 7 days after surgery to prevent their adverse effects on the initial healing of the incision [7,8].

Conclusion

When choosing the upper arm port as a vascular access device for patients, a comprehensive evaluation is required. In addition to the treatment plan, the patient's systemic condition and the local condition of the upper arm should also be included in the evaluation category.

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