



Case report

A report of an unexpected complication of PORT-A-CATH insertion

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ABSTRACT

Introduction: Vascular access is essential in the management of patients, and sometimes poses a problem, especially in patients requiring chronic treatment. Surgical insertion of the port-a-cath solved this problem by providing easy access, but unfortunately, it's associated with some complications.

Case presentation: We present a case of 32 year-old woman, diagnosed with advanced breast cancer, admitted for insertion of a port-a-cath for neoadjuvant chemotherapy. A few hours after the operation, the patient developed hoarseness and a cough. A flexible laryngoscope showed the left vocal cord which was fixed in the middle position and did not move, while the other maintained normal motility. The patient was treated conservatively.

Conclusion: This case demonstrated a rare and unexpected complication of the insertion of a port-a-cath, which is the result of an injury to the recurrent laryngeal nerve. We are reporting this case to encourage physicians to take note of this complication and know how to manage it.

1. Introduction

One of the best indications for the insertion of an implantable chamber catheter is the administration of chemotherapy for patients requiring long-term treatment [1]. The placement of these catheters is never without risks, among which the immediate complications related to the surgical technique [2].

In this article, we present a young woman who developed hoarseness after involvement of the recurrent laryngeal nerve during the insertion of a port-a-cath and was treated conservatively.

This case has been according to the SCARE criteria [3].

2. Case presentation

A 32 year-old-woman, with no medical or surgical history, was recently diagnosed with locally advanced breast cancer. Her oncologist preferred to start neoadjuvant chemotherapy with the intention of downstaging the tumor to allow for breast-conserving surgery.

The preoperative workup was normal, and the patient was admitted to the operating room the same day of her first dose of chemotherapy.

The patient was a little anxious during the operation. She was placed supine, without Trendelenburg, an ultrasound of the neck was performed to locate the internal jugular vein and the drawings were made. Disinfection of the skin and placement of drapes in a sterile manner.

Local anesthesia was performed using 20 cc of Lidocaine 1% and the vein was punctured using ultrasound-guidance, insertion of the guidewire, and fluoroscopic-control of its position in the superior vena cava. Preparation of the subcutaneous space and tunneling of the catheter. Insertion of the dilator over the guidewire, the guidewire was then removed and the catheter was inserted in its place. The positioning of the catheter was carried out, and the verification of the presence of the end of the catheter under the carina. Connect the catheter to the port and locked. Re-checking the position, rinsing of the port, and connect of the infusion were done. Good hemostasis was insured before closure. The operation was straightforward with no complications or blood loss, and the patient was transferred to recovery for post-operative monitoring.

About 5 h after the operation, the patient developed hoarseness and cough, which are not associated with dyspnea or dysphagia. Her vital signs were within the normal range. ENT (Ear, Nose, and Throat) doctor consultation performed, an urgent flexible laryngoscopy was ordered, which showed the left vocal cord which was fixed in the middle position and did not move, while the other kept normal motility (Fig. 1).

This was because the recurrent laryngeal nerve was affected during the operation, so oral steroids were prescribed for two weeks.

A month after, the patient presented for follow-up and we noticed a full recovery.

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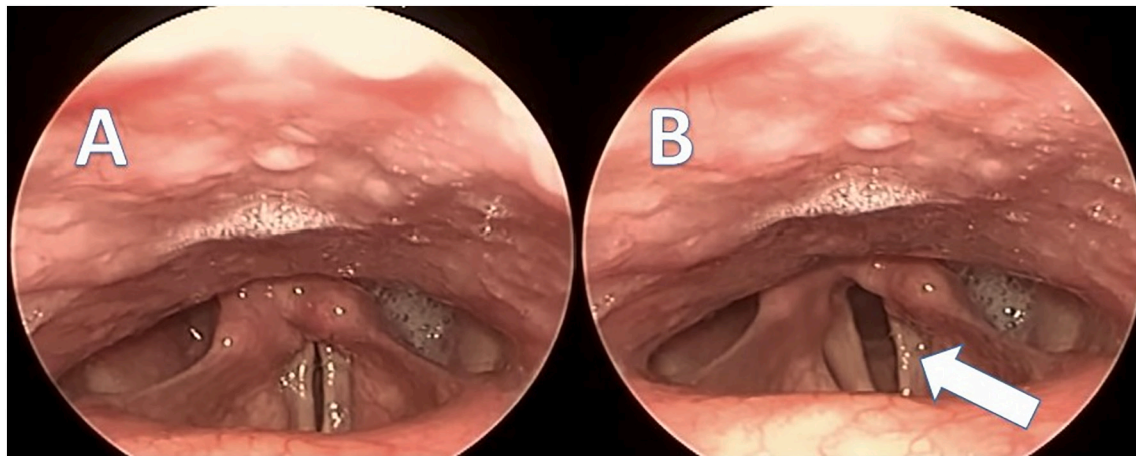


Fig. 1. Flexible laryngoscopy. A: The 2 vocal cords in adduction. B: Left vocal cord fixed in median position (white arrow) while the other is in abduction.

3. Discussion

Insertion of a Port-a-cath is a surgical procedure frequently used in patients with chronic disease requiring vascular access for long-term treatment [1], and it is used for different etiologies and indications [2], mainly the administration of chemotherapy and parenteral nutrition [1]. It is considered a safe procedure, but care should be taken as complications can occur [4]. These complications are divided into immediate and late complications [2], and are further divided according to their severity, the major complications of which are those that require intervention or treatment for more than a day [1]. They also vary depending on the technique used in vascular access, and can sometimes lead to morbidity and mortality [2].

The reported complication rate was equivalent to 7 to 12% of cases [1], with the majority of cases related to vascular injury, with inappropriate placement [2], and infection being the most common [1]. The use of ultrasound and the surgeon's experience reduced this complication rate [2].

The recurrent laryngeal nerve is a branch of the tenth cranial nerve (Vagus Nerve) [5], and having the surgeon familiar with the anatomy of the nerve and its path can help avoid complications [4]. Recurrent laryngeal nerve damage can be the result of direct trauma, traction, or perineural hematoma [2], and can cause vocal cord paralysis, as it is responsible for the motility of the majority of the intrinsic muscle of the larynx [5], and it is considered to be the second cause of vocal nerve paralysis after malignancy, approximately 24% of iatrogenic injuries [4].

In patients whose injury resulted in unilateral vocal cord paralysis, they complain of hoarseness of the voice, sometimes associated with dysphagia and aspiration [4]. Interventions to correct the problem may be postponed because in most cases they will recover on their own [4], and can take up to a year [2].

4. Conclusion

In our case, vascular access for implantation of the port-a-cath was considered to be the cause of vocal cord paralysis. Vocal cord paralysis is usually self-limited and should be treated conservatively. This procedure remains a safe procedure with a few complications that any surgeon should keep in mind.

Informed consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this

journal on request.

CRedit authorship contribution statement

All authors were involved with the design, drafting, revision, and final approval of this case.

Declaration of competing interest

This article has no conflict of interest with any parties.

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The study type is exempt from ethical approval.

Provenance and peer review

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