Scholars Journal of Medical Case Reports **ISSN 2347-6559 (Online)**
Sch J Med Case Rep 2016; 4(10):782-784 **ISSN 2347-9507 (Print)**

(An International Publisher for Academic and Scientific Resources) DOI: 10.36347/sjmcr.2016.v04i10.024

Pneumatocele occurred by anterior mediastinotomy, an unusual complication of Chamberlain procedure

***Souleymane Diatta, Modibo Doumbia, Momar Sokhna Diop, David Douglas Banga Nkomo, Adama Sawadogo, Magaye Gaye, Pape Adama Dieng, Papa Salman Ba, Assane Ndiaye, Amadou Gabriel Ciss, Mouhamadou Ndiaye**
*Medical Doctor (MD), University Hospital of Fann, Dakar, Sénégal
Department of thoracic surgery, University Hospital of Fann, Dakar, Sénégal

***Corresponding author**
Dr. Souleymane Diatta
Email: soul.diatta@yahoo.fr

Abstract: The authors report an unusual pneumatocele occurred by anterior mediastinotmy (Mac Neil and Chamberlain procedure) for mediastinal tumor biopsy.
Keywords: pneumatocele, mediastinotomy, biopsy.

INTRODUCTION

A number of less invasive procedures have been developed to perform biopsy for mediastinal tumors. These protocols include CT (computed tomography)-assisted biopsy, pre-scalene biopsy, mediastinoscopy, mediastinotomy and Video Assisted Thoracic Surgery. Left anterior mediastinotmy was first described by Mac Neil and Chamberlain in 1966 [1]. It is a quick and secure procedure occurring low morbidity and that ease removal of enough quantity of tissue for histology, immunology and chemistry. The following images are depicting a pneumatocele which is a rare post-mediastinotomy complication.

CASE REPORT

BS, 62 years old male, store man, heavy smoker (20 pack-years) who stopped smoking 6 months prior to hospital admission. He was referred to our staff for the management of mediastinum mass fortuitously discovered while investigating dyspnea graded 3 according to the Medical Research Council breathlessness scale.

The physical examination found out a good physical appearance, weighing 145, 5 pounds with a height of 5, 8 feet corresponding to a Body Mass Index of 22.05 kilograms per square meter. It also revealed a superior vena cava (SVC) syndrome.

Chest X ray and CT revealed a tumor of anterior superior mediastinal compartment, compressing the SVC. The size of tumor was 83 x 76 mm.

Cardiac investigations and lab tests were normal.

Right anterior mediastinotomy in the 3rd intercostal space was performed to get access to the tumor which was hard, whitish, fibrous and lying on the right lung apex. The biopsy consisted of harvesting 3 slices of the tumor then we closed the chest on a tube connected to underwater seal.

The post-operative course was normal then the chest drain was removed at day 3 and the wound completely healed at day 15. Histology concluded to sarcomatoid large-cell carcinoma.

Over the follow up at the end of the first month, a painless crepitating bulge inflated by air progressively appeared along the scar (figure 1). The size was not collapsible neither expansible by cough.

The chest CT showed post-operative extra parenchymal pneumatocele (figure 2, 3).

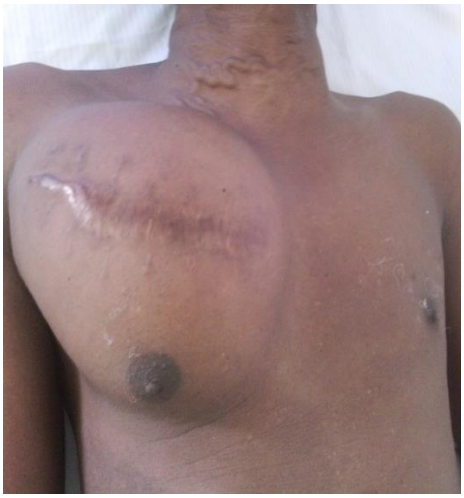

Fig 1: Pectoralis large bulge along the right mediastinotomy scar, with collateral circulation.

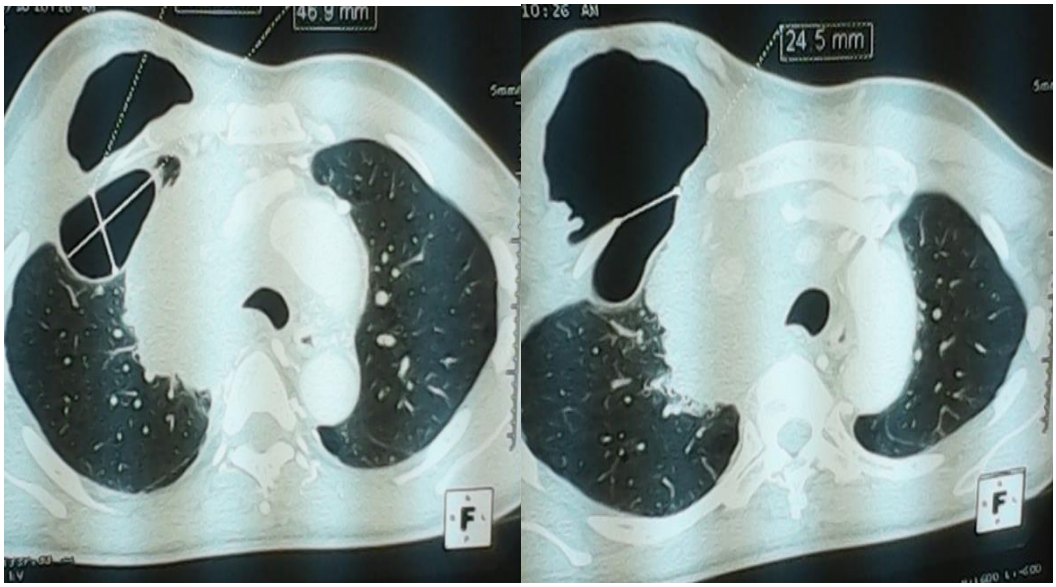

Fig 2: Cross-sectional chest CT showing intra and extra thoracic pneumatocele.

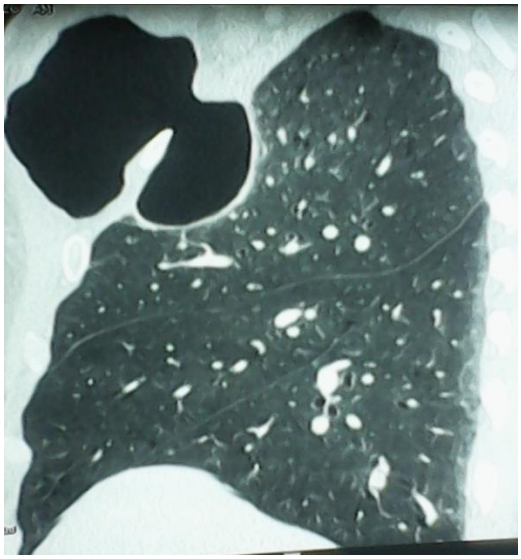

Fig 3: Pneumatocele as showed by the para-sagittal chest CT

DISCUSSION

Anterior mediastinotomy was first reported by Mac Neil and Chamberlain [1] as a method for histologic diagnosis of mediastinum tumors and assessment of extended bronchopulmonary cancers. It is a reliable and less-morbid surgical access that is simple and fast to perform [2]. In addition, this procedure has fewer drawbacks than mediastinoscopy and VATS thoracoscopy [3]. The published series commonly found low or nil mortality and morbidity under 7 % including pneumothorax, chest wall infection and atelectasis [5]. Patent air leaks on the pulmonary biopsy sites are also reported by some series [5, 6]. Overall, pneumatocele is not reported as a complication of anterior mediastinotomy yet although it may occur in case of lung trauma and post trauma situations [7, 8].

CONCLUSION

Pneumatocele is unusual complication of anterior mediastinotomy.

Conflict of interest: none

RÉFÉRENCES:

1. McNeill TM, Chamberlain JM. Diagnostic anterior mediastinotomy. The Annals of thoracic surgery. 1966 Jul 31; 2(4):532-9.
2. Martigne C, Velly JF, Clerc PH, Zanotti L, Couraud L. Intérêt et place actuelle de la médiastinotomie antérieure dans le diagnostic des affections médiastinales: à propos d'une série de cent cas. InAnnales de chirurgie 1989 (Vol. 43, No. 2, pp. 171-173). Elsevier.
3. Nechala P, Graham AJ, McFadden SD, Grondin SC, Gelfand G. Retrospective analysis of the clinical performance of anterior mediastinotomy. The Annals of thoracic surgery. 2006 Dec 31;82(6):2004-9.
4. Ndiaye A, Gaye M, Diarra O, Ciss AG et al. Place de la médiastinotomie antérieure dans le diagnostic des tumeurs intra thoraciques. Dakar Med. 2011;56(1) ; 260-267.
5. Steiger Z, Chaudhry S, Wilson RF. The use of anterior mediastinotomy to assess intrathoracic lesions. The American surgeon. 1981 Jun;47(6):251-3.
6. Desrues B, Delaval P, Motreff C, Kernec J, Dormoy C, Pencole C, Bergeron D, Malledan Y, Saint-Marc C. Pneumatocèles et hémato-pneumatocèles à post-traumatiques du poumon: à propos de 3 observations. Revue des maladies respiratoires. 1988;5(1):67-70.
7. Said M, Memmi F, Jerbi-Omezzine S, Gannouni A. La pneumatocèle, complication rare d'une broncho-pneumopathie. La Presse Médicale. 2004 Aug 31;33(14):942.