Pulmonary Gunshot Wound Revealing Pulmonary Tuberculosis

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Abstract
Pulmonary tuberculosis is a major flail of mankind, 1/3 of the world population is infected. In Morocco, the incidence is estimated by the World Health Organization to 89 cases per 100 000 inhabitants. However, gunshot assaults are rare. Many circumstances of discovery of tuberculosis were described. We present the case of an incidental finding of pulmonary tuberculosis in a young patient victim of a gun attack.

Keywords: Penetrating trauma; Hemothorax; Tuberculosis; Biopsy

Abbreviations: WHO: World Health Organization; TB: Tuberculosis; ARDS: Acute Respiratory Distress Syndrome

Introduction
Pulmonary tuberculosis is a major health problem, infecting 1/3 of the world population [1]. In Morocco, the incidence is estimated by WHO to 89 cases per 100 000 inhabitants [2]. However, gunshot assaults are rare. Penetrating traumas are dominated by knives attack. It is following this epidemiological paradox that we present a case of pulmonary tuberculosis revealed by a pulmonary wound after a gunshot attack.
Case Presentation

A young man of 23 years old without any past medical history, from a modest socioeconomic family was admitted to the emergency for left axillary gunshot wound that occurred 5 days before. On admission he had stable hemodynamic parameters. He presented severe dyspnea and left thoracic pain. Physical exam revealed an axillary wound inlet of 0.5 cm, sub-cutaneous emphysema and air pleural effusion. There was no outlet. The left radial pulse was present and symmetric to the right. Chest X-ray showed a left abundant hemopneumothorax with the gunshot near aorta. An axillary chest tube was performed and 300 ml of blood was evacuated. Chest CT angiography (Figure 1A & 1B) showed linear parenchymal condensation of the upper and lower left lobes representing the gunshot trajectory. This gunshot was separated from the aorta by a tiny part of lung. Neither hemomediastinum nor vascular injury was found. Surgery was retained for gunshot extraction. A conservative posterolateral thoracotomy showed blood clots and pachypleuritis. Also, the gunshot crossed the upper left lobe from top to bottom, penetrated the fissure on the side of lower lobe and fitted in the posterior part of the Fowler segment. Removal of the gunshot was performed after resecting a small collar of the lung. Other findings showed nodules on the basal part of left lower lobe which were biopsied. The postoperative course was uneventful. Histology of nodules showed caseo-follicular pulmonary tuberculosis. An antibacillary treatment was prescribed and the patient showed good clinical and radiological evolution (Figure 2).

Discussion

Our observation is particular by the revealing mode of pulmonary tuberculosis. Indeed, it was discovered after a lung biopsy following incidental intra-operative suspicious lung nodules during gunshot extraction. To our knowledge this revealing mode has never been reported in literature. In France pulmonary tuberculosis. Indeed, it was discovered after a lung biopsy following incidental intra-operative suspicious lung nodules during gunshot extraction. To our knowledge this revealing mode has never been reported in literature. In France posterior lateral thoracotomy showed blood clots and pachypleuritis. Also, the gunshot crossed the upper left lobe from top to bottom, penetrated the fissure on the side of lower lobe and fitted in the posterior part of the Fowler segment. Removal of the gunshot was performed after resecting a small collar of the lung. Other findings showed nodules on the basal part of left lower lobe which were biopsied. The postoperative course was uneventful. Histology of nodules showed caseo-follicular pulmonary tuberculosis. An antibacillary treatment was prescribed and the patient showed good clinical and radiological evolution (Figure 2).

Figure 2: Follow up image after 2 months.

Conclusion

Pulmonary gunshot wound may be a circumstance of discovery of pulmonary tuberculosis clinically and radiologically asymptomatic. A lung biopsy called "de passage" should be performed for all suspicious lesions especially during a stressful surgery where the surgeon will tend to neglect this type of injury. Indeed histological confirmation of the asymptomatic forms is primordial to begin antibacillary treatment which is the only guarantee of a good prognosis in the context of tuberculous pneumonia and pulmonary contusion.

References


