Intrapericardial extracavitary lipomas are very rare. We would like to share our experience with a case of intrapericardial lipoma in a male aged 54 years. His mode of presentation and radiographic investigations are reported. He was successfully managed via a right anterior thoracotomy.

Intrapericardial lipoma is a rare primary cardiac tumor [1]. Most of the articles regarding it are case reports with few case series which render it difficult to establish a uniform approach and flow chart for management of such a rare benign tumor [2–5].

Most of the case reports state that surgical excision of the lipoma is mandatory to prevent compression to the heart and it is important to excise all of the tumor with the pedicle to prevent recurrence of the tumor, even if the rate of lipoma recurrence, after total resection is very low [6,7].

On the other hand we found some case reports stating that pericardial lipoma should be managed radically even if benign featuring. On reviewing the case report by Minematsu et al. [8], the authors stated that: “Even if diagnosed pathologically as benign, mediastinal lipoma causing clinical symptoms is considered clinically malignant”.

Regarding the low malignant transformation and recurrence rate of this tumor and the short life expectancy of the patient who usually come in old age, it is more practical to operate him using a minimally invasive approach which is....
more feasible and provide a rapid recovery of the patient without compromise of the surgical and oncological principles.

2. Case study

54 year old male patient was complaining of dyspnea on exertion. His physical examination was normal. Chest X ray showed increase in cardiothoracic ratio confirmed by CT scan chest (Fig. 1) to be due to soft tissue mass compressing the heart. Echocardiography stated that the mass was extrapericardial with no invasion to the cardiac chambers. CT guided biopsy revealed a histological picture consistent with lipoma with no sign of malignancy or invasion. Decision was made to approach the lipoma through a right anterior thoracotomy lightened by the echocardiography and CT findings that state that the mass was extrapericardial, main bulk of the mass was on the right side and the pathology report confirming the benign featuring of the mass.

Under general anesthesia with double lumen endotracheal tube, chest was entered through right anterior thoracotomy. Exploration of the right chest and pericardium revealed that the lipoma was totally intrapericardial. Longitudinal incision of the pericardium along the phrenic nerve exposed the mass which was loosely attached to the right atrium, right ventricle and the parietal pericardium. Blunt dissection of the lipoma from these structures was done. It was delivered through the thoracotomy wound successfully without significant bleeding or cardiac arrhythmia (Fig. 2). Chest was closed in standard fashion with one chest drain after approximation of the pericardial edges together. Post operative course was uneventful and patient was sent home on the 3rd postoperative day.

We followed up our patient for 3 years now with CT scan chest and echocardiography with no residual tumor or local recurrence so far.

3. Discussion

Benign pericardial tumors can be approached through VATS or anterior thoracotomy according to the size and location of the tumor. Regarding this case, lipoma was about 12 × 9 cm so we preferred to approach it through thoracotomy and we chose the right side as the main bulk of the tumor on this side. A plan to do a transverse sternotomy and complete clamshell incision in case of difficult delivery of the mass or major complication was planned for but was not needed. Median sternotomy with a standby cardiopulmonary bypass was not appropriate, according to our point of view, as tumor seemed to be benign with no invasion to surroundings, preoperative echocardiography state that the tumor was extrapericardial and recurrence rate reported in literature was so low to consider a radical approach [6,7]. Even with intrathoracic tumors larger than this size and of benign features, we previously reported operating

![Fig. 1. CT scan chest showing soft tissue mass compressing the heart displacing it to the left hemithorax.](image-url)
them via VATS approaches with an excellent results [9]. The most important concern from our point of view was the benign nature of the mass together with its location inside the chest.

4. Conclusion

Intrapericardial lipoma is a rare tumor that can be safely excised through thoracotomy if it attained huge sizes. However, we recommend minimal access approach for smaller benign intrapericardial pathology whenever possible.

Competing interests

The authors declare that they have no competing interests.

References


Fig. 2. Intraoperative view with the tumor removed outside the chest, note the size of the tumor in comparison to incision.

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