Case Report

Dense pericardial adhesions around pigtail necessitating pericardiectomy

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ABSTRACT:

Tuberculosis is being the most common cause of pericardial effusion in Indain scenario(1). Various modalities are used for the drainage for effusion. Pigtail drainage being the one of the most common modality for drainage of effusion. We reported a case where pigtail was introduced for the drainage, later at the time of removal, the pigtail got adhered to pericardium which necessitated surgical intervention for its removal.

BACKGROUND:

Tuberculosis is the leading cause of pericardial effusion (PE). Patient presenting with symptoms of orthopnea or cardiac tamponade due to massive PE, necessitates initial management with pericardiocentesis followed by surgical intervention if there is repeated accumulation of fluid in the pericardial sac.

CASE REPORT:

Herewith we reported case of , 65 year old gentleman, a known case of tubercular pericardial effusion underwent a continuous pigtail catheter drainage for a massive symptomatic PE (**Fig 1**)

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Fig 1

Figure 1: Chest Xray showing Pigtail catheter in pericardial cavity

The pigtail was planned for withdrawl when the drainage output stopped coming after 20days and the Trans thoracic ECHO confirmative of no pericardial effusion. However, obvious resistance was found while withdrawing the catheter. Surgical retrieval attempted initially by Pericardial window by partial lower sternotomy, but due to extensive pericardial adhesions around the catheter, sternotomy incision extended and complete mid sternotomy done **(Fig 2A and 2B).** Dense pericardial adhesions around the pig tail released and pericardiectomy done to retrieve the pigtail catheter.

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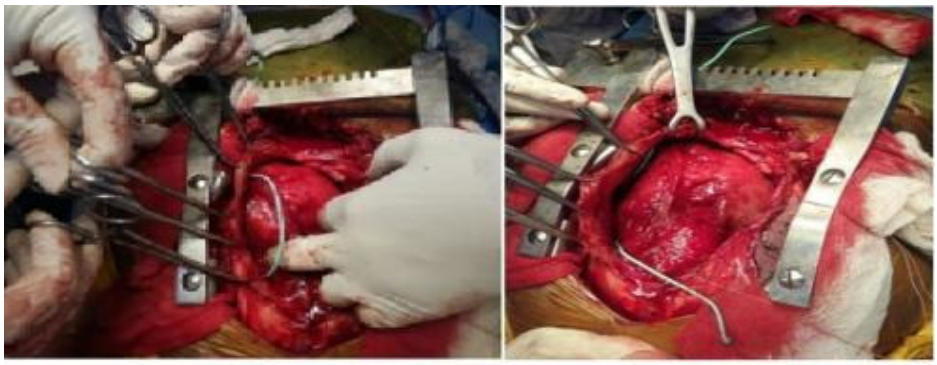

Fig 2 (A) Fig 2(B)

Figure 2(A) and 2(B) showing dense pericardial adhesions around the pigtail catheter.

DISCUSSION:

A simple aetiological classification for pericardial diseases is to consider infectious and non-infectious causes[1]. The aetiology is varied and depends on the epidemiological background, patient population and clinical setting. In developed countries, viruses are usually the most common aetiological agents of pericarditis,6 whereas tuberculosis (TB) is the most frequent cause of pericardial diseases in the world and developing countries, where TB is endemic.

Tuberculosis causes effusive pericarditis leading to accumulation of protein rich fluid in the pericardial cavity which leads to impairment of diastolic filling and systolic dysfunction causing decreased cardiac output. Gradual increased accumulation of the fluid in pericardial cavity leads to cardiac tamponade which is an emergency and prompt drainage is the treatment of choice[2]. Pericardiocentesis under echocardiographic guidance with continuous drainage over pigtail catheter is the preferred modality of treatment for chronic fluid collections[3]. Drainage leads to improvement in patient symptoms and hemodynamic profile. Removal of the pigtail catheter is warranted when there is evidence of minimal pericardial collection in echocardiographic evaluation. Routinely pigtail catheter is pulled out blindly with ease, however long duration of indwelling pigtail catheter causes tissue reaction around itself.

Dense pericardial adhesions are formed around the pigtail because of the tissue reaction. It's these pericardial adhesion which hamper the removal of pigtail catheter. Any attempt to take the pigtail catheter out forcibly can lead to injury to heart wall,hence whenever the pigtail catheter is stuck in situ its removal is warranted under vision. For proper exposure of the catheter either a subxiphoid pericardial window approach or median sternotomy is recommended. Release of pericardial adhesions under vision facilitates the removal of in situ pigtail catheter with minimal risk of inadvertent injury to the surrounding structures.

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