DOI:https://doi.org/10.54393/pbmj.v5i2.358

PAKISTAN BIOMEDICAL JOURNAL
https://www.pakistanbmj.com/journal/index.php/pbmj/index
Volume 5, Issue 2 (February 2022)

Original Article

Tuberculous Pericardial Abscess with Impending Pericardial Effusion and Cardiac Tamponade

Areesha Shahid[1*], Muhammad Asif[2], Muhammad Abid[3], Muhammad Zarrar Arif Butt[4]

[1]Rashid Latif Medical Complex, Lahore, Pakistan
[2]Quaid e Azam Medical College, Bahawalpur, Pakistan
[3]D.G. Khan Medical College, Punjab, Pakistan
[4]Fatima Memorial Hospital, Lahore, Pakistan

ARTICLE INFO

Key Words:
Tuberculosis, multiple pericardial effusion, cardiac tamponade, heart problems

How to Cite:
Shahid, A. ., Asif, M. ., Abid, M. ., & Arif Butt, M. Z. . (2022). Tuberculous pericardial abscess with impending pericardial effusion and cardiac tamponade. Pakistan Biomedical Journal, 5(2). https://doi.org/10.54393/pbmj.v5i2.358

***Corresponding Author:**
Areesha Shahid
Rashid Latif Medical Complex, Lahore.
areeshashahid345@gmail.com

ABSTRACT

Tuberculosis is a typical reason for pericardial emission particularly in the emerging nations. Regardless of the decrease in mortality because of tuberculosis and a general diminishing in its occurrence, tuberculosis and its complexities stay a genuine medical issue. **Objective:** The main objective of the study is to analyse the tuberculous pericardial abscess presenting as multiple pericardial effusion and cardiac tamponade. **Methods:** This randomized control trial study was conducted in Rashid Latif medical complex, Lahore during November 2020 to August 2021. The data was collected from 10 patients. **Results:** The patients were tachypnoeic, poisonous looking and in sepsis. Their important bodily functions showed the accompanying: respiratory pace of 24 breaths/min and tachycardia of 110 beats/min. Clinical assessment upheld the finding of heart problems. **Conclusion:** It is concluded that tuberculosis stays a genuine medical condition. In this manner confusions like pericarditis, tamponade and boil are inescapable and in spite of satisfactory medication treatment, 33% to one portion of the patients in the long run require Pericardiectomy.

INTRODUCTION

For the most part, planned randomized preliminaries of BCG have been utilized to assess adequacy of BCG, and review case-control investigations of BCG have been utilized to look at viability of changed BCG immunization strains [1]. Despite the fact that proportions of BCG counteraction adequacy/viability have not been predictable, when BCG inoculation of babies was halted in Sweden, a situation that gave a non-immunized correlation bunch, a six-overlap expansion in TB notices was seen in new born children [2]. In a planned randomized control preliminary in Britain wherein north of 50,000 more seasoned kids were allotted to no immunization or one of two antibody gatherings, practically identical counteraction viability of 81% to 84%, individually, when information were looked at more than a 20-year time span [3]. It is suggested that BCG ought to be given upon entering the world or at the hour of earliest contact with the youngster ideally before 9 months old enough and absolutely when he is one year old [4]. In one review it is shown that tuberculin change rates are somewhat higher when it is given a little later say at 1-3 months old enough. BCG can be handily given to new brought into the world over 2000 grams of weight and is viable in preterm new born children moreover. Anyway, little for gestational age children show unfortunate post inoculation change [5]. Tuberculosis is a typical reason for pericardial emission particularly in the emerging nations. Regardless of the decrease in mortality because of tuberculosis and a general diminishing in the occurrence, tuberculosis and its complexities stay a genuine medical issue. In any case, tuberculous pericardial radiation prompting pericardial ulcer is an uncommon show [6-7]. Enormous pericardial radiations are unprecedented and their appearance as cardiovascular tamponade is intriguing. It is realized that

DOI:https://doi.org/10.54393/pbmj.v5i2.358

the most widely recognized reason for pericardial radiation is threat trailed by TB. Already it was explained that the productive and safe method for treating pericardial emanation was peri-cardiocentesis [8]. Tuberculosis is a sickness that infect a large part of the world, including Pakistan. It is assessed to happen around 2% of instances of aspiratory TB. A subtype is normally shown as a treacherous moderate constant infection which can prompt haemodynamic unsettling influences [9-10].

METHODS

This randomized control trial study was conducted in Rashid Latif medical complex, Lahore during November 2020 to August 2021. The information was gathered from 10 patients. General physical and fundamental assessment was average and patients was imperatively steady. After four days they got back with fever and haemoptysis. Clinical assessment uncovered dislodged zenith beat, expanded Anterior Posterior (AP) distance across, diminished air section, dull to percussion and delicate right epigastrium. ECG showed diminished LV capacity with a gentle circumferential pericardial emission. Also, indications of tamponade, RA breakdown also huge variety and huge Pericardial Effusion - 53 mm were seen. Transthoracic echocardiogram uncovered worldwide pericardial radiation of RV breakdown and scientific indications of heart problems. Blood, urine and stool culture uncovered no development of any distinguished microbe.

RESULTS

The patients were tachypnoeic, poisonous looking and in sepsis. Their important bodily functions presented the accompanying: respirational pace of 25 breaths/min, tachycardia of 111, and pulse of 128/69. Clinical assessment upheld the finding of heart tamponade. Figure (1-3) There was no fringe oedema, cyanosis, whiteness and icterus.

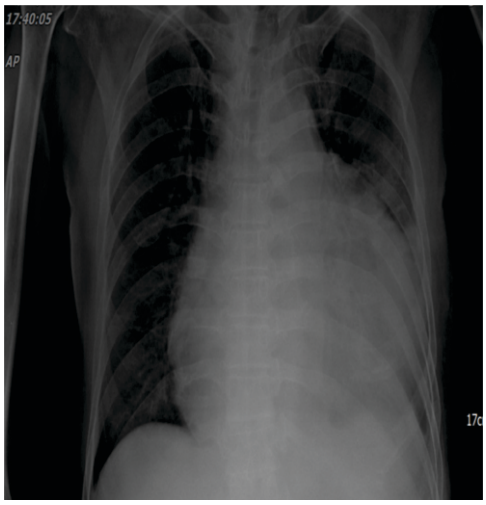

Figure 1: Chest Radiograph At the time of admission

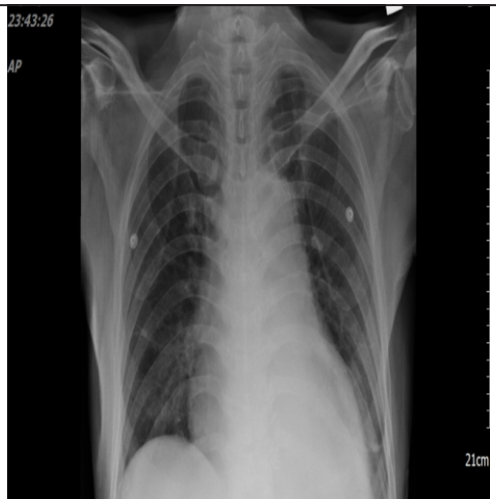

Figure 2: Chest Radiograph After emergency pericardiocentesis

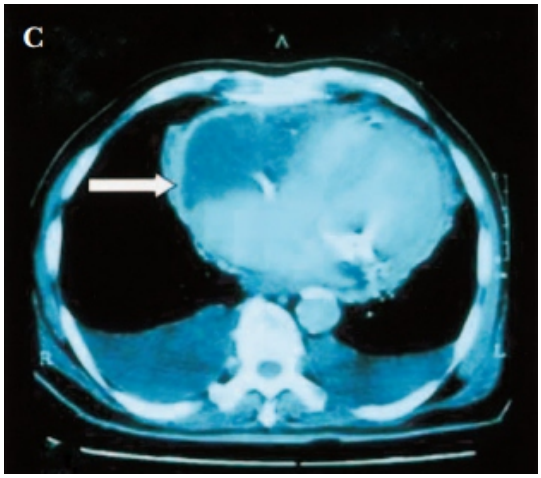

Figure 3: Computed tomography shows pericardium and cystic mass

DISCUSSION

The death rate goes from 14 to 40% and purulent pericarditis is interesting. The clinical indication of TB pericarditis might be vague and fluctuates with side effects of fever, weight loss, sweats and weakness [11-12]. Nonetheless, this is regularly given hack, diminished exertion resistance and chest torment [13]. Sometimes, it very well may be given ongoing cardiovascular pressure emulating cardiovascular breakdown or might be introduced intensely with heart tamponade [14]. This patient was conceded with side effects impersonating persistent cardiovascular breakdown where he whined of demolishing exertion capacity to bear a one-month length and was consequently analysed as heart tamponade that requires crisis pericardiocentesis [15-16]. Nonetheless, it is regularly troublesome. Dynamic aspiratory TB and pleural emanation perhaps saw in 30% of cases with pericarditis while 80-90% of the cases showed highlights

DOI:https://doi.org/10.54393/pbmj.v5i2.358

of dynamic pneumonic TB [17-18]. Vague ST wave irregularities were found in practically with pericarditis and different fluctuations incorporate ECG voltage [19-20].

CONCLUSION

It is presumed that tuberculosis stays a genuine medical condition. In this manner confusions like pericarditis, tamponade and boil are inescapable and in spite of satisfactory medication treatment, 33% to one portion of the patients, in the long run, require Pericardiectomy.

REFERENCES

[1] Fatimi SH, Faheem-ul-Haq, Jalil F, Muzaffar M, Hanif HM. Tuberculous pericardial abscess with impending pericardial effusion and cardiac tamponade. J Pak Med Assoc. 2011,61(3):286-7.

[2] Avşar A, Günay NK, Celik A, Melek M. A case of cardiac tamponade caused by tuberculous pericarditis. Turk Kardiyol Dern Ars. 2008,36(7):482-4.

[3] Peebles CR, Shambrook JS, Harden SP. Pericardial disease—anatomy and function. Br J Radiol. 2011,84 Spec No 3(Spec Iss 3): S324-37. doi: 10.1259/bjr/16168253.

[4] Larrieu AJ, Tyers GF, Williams EH, Derrick J: Recent experience with tuberculous pericarditis. Ann Thorac Surg. 1980,29:464-468. doi.org/10.1016/S0003-4975(10)61681-5

[5] Heller T, Lessells RJ, Wallrauch C, Brunetti E. Case report: tuberculosis pericarditis with cardiac tamponade: management in the resource-limited setting. The American journal of tropical medicine and hygiene. 2010 Dec 6;83(6):1311. doi.org/10.4269/ajtmh.2010.10-0271

[6] Meyers DG, Bagin RG, Levene JF: Electrocardiographic changes in pericardial effusion. Chest. 1993, 104(5):1422-1426. doi.org/10.1378/chest.104.5.1422

[7] Cherian G, Habashy AG, Uthaman B, Hanna RM. Tuberculous pericardial effusion - mediastinal lymph glands: the cause and clue to the etiology. Indian Heart J 2003; 55(3): 228-33

[8] Quraishi AR, Khan AA, Kazmi KA, Najaf SM, Basir MN,et al. Clinical and echocardiographic characteristics of patients with significant pericardial effusion requiring pericardiocentesis. J Pak Med Ass 2005; 55: 66-70

[9] Gulati Gs, Sharma S. Pericardial abscess occurring after tuberculous pericarditis: image morphology on computed tomography and magnetic resonance imaging. Clin Radiol 2004; 59(6): 514-9. doi: 10.1016/j.crad.2003.12.005.

[10] Kameyama K, Huanq CL, Okamoto T, Ishikawa S, Yamamoto Y, Yokomise H. Video-assisted thoracoscopic pericardial fenestration for tuberculous pericardial effusion. Jpn J Thorac Cardiovasc Surg 2004,52: 68-70.

[11] Gowrinath K, Phani Krishna B, Raghavendra C, Sai Ravi Shankar A: Unusual cause of pyopericardium with tamponade. J Clin Sci Res. 2015, 4:61-64. doi.org/10.15380/2277-5706.JCSR.14.001

[12] Sagristà-Sauleda J, Barrabés JA, Permanyer-Miralda G, Soler-Soler J: Purulent pericarditis: review of a 20-year experience in a general hospital. J Am Coll Cardiol. 1993 ,22(6):1661-1665. doi: 10.1016/0735-1097(93)90592-o.

[13] Gregory AK, Connery CP, Anagnostopoulos CE. A late complication of tuberculous pericarditis after partial pericardial resection. Ann Thorac Surg 1998, 65: 542-4.

[14] Steinberg C, Pelletier MJ, Perron J, Kumar A, Champagne J. Sudden cardiac arrest due to subtotal absence of left-sided pericardium—case report and review of the literature. Congenit Heart Dis 2013,8(3): E92-8. doi: 10.1111/j.1747-0803.2012.00686. x.

[15] Bogaert J, Francone M. Pericardial disease: value of CT and MR imaging. Radiology 2013,267(2):340-56. doi: 10.1148/radiol.13121059.

[16] Dybowska M, Błasińska K, Gątarek J, et al. Tuberculous Pericarditis-Own Experiences and Recent Recommendations. *Diagnostics (Basel)*. 2022,12(3): 619.doi:10.3390/diagnostics12030619

[17] López-López JP, Posada-Martínez EL, Saldarriaga C, et al. Tuberculosis and the Heart. *J Am Heart Assoc*. 2021;10(7): e019435. doi:10.1161/JAHA.120.019435

[18] Isiguzo G, Du Bruyn E, Howlett P, Ntsekhe M. Diagnosis and Management of Tuberculous Pericarditis: What Is New? *Curr. Cardiol. Rep.* **2020**, *22(1)*, 2. doi: 10.1007/s11886-020-1254-1.

[19] Bizzi E, Picchi C, Mastrangelo G, Imazio M, Brucato A. Recent advances in pericarditis. Eur J Intern Med. 2022 ,95:24-31. doi: 10.1016/j.ejim.2021.09.002.

[20] Lima NA, Stancic C, Vos D, Carmen Diaz Insua MMD, Lima CCV, *et al.* Hospital admissions for tuberculous pericarditis in the United States 2002-2014. Int J Mycobacteriol. 2019,8(4):347-350. doi: 10.4103/ijmy.ijmy_150_19.