

A case of liver abscess after permanent pacemaker implantation

Fei Hao¹, Yanqing Guo¹, Liping Guo¹, and Haixiong Wang¹

¹Shanxi Cardiovascular Hospital

January 30, 2024

Abstract

Liver abscess after pacemaker operation has not been reported before. We reported a 68-year-old male patient who developed a liver abscess after permanent pacemaker implantation. After 2 weeks of anti-infection treatment, the patient's symptoms were relieved.

A case of liver abscess after permanent pacemaker implantation

Fei Hao ¹⁺, Yanqing Guo ²⁺, Liping Guo², Haixiong Wang^{2*}

¹CT Scan Room, Shanxi Cardiovascular Hospital, Taiyuan, 030024, Shanxi, P.R.China

²Department of Cardiology, Shanxi Cardiovascular Hospital, Taiyuan, 030024, Shanxi, P.R.China

⁺These authors contributed equally to this work.

***Corresponding Author.** Haixiong Wang. Department of Cardiology, Shanxi Cardiovascular Hospital, Taiyuan, Shanxi. Tel: +86-18135114037, Fax: +86-0351-5661138, E-mail: *cz1976whx@126.com*

Data availability statement

The original figures and data are available from the corresponding author by request.

Funding information

Research Project Supported by the Doctor Research Fund of Shanxi Cardiovascular Hospital [XYS2020B003].

Conflict of Interest

The authors declare that there were no conflict of interests.

Ethics Statement

This study was approved by the ethics committee of Zhongshan Hospital Fudan University, written informed consent was obtained from the patient.

Informed consent

This study was conducted with informed consent of patients.

A case of liver abscess after permanent pacemaker implantation

Abstact

Liver abscess after pacemaker operation has not been reported before. We reported a 68-year-old male patient who developed a liver abscess after permanent pacemaker implantation. After 2 weeks of anti-infection treatment, the patient's symptoms were relieved.

A 68-year-old man was diagnosed with third degree A-V block in our hospital due to syncope 2 times. Permanent pacemaker implantation was performed after evaluation. The patient had fever on the second day after the operation. The body temperature was 38.0, the right upper abdomen tenderness and percussion pain. Shilver occurred every time when the right upper abdomen was pressed. Abdominal CT showed liver abscess (Figure A and B) (no obvious abnormality was found in abdominal ultrasound before operation). Cefuroxime and vancomycin were given for anti-infection treatment. After 2 weeks of treatment, the patient's symptoms were relieved and the temperature was normal. The abdominal CT showed that the liver abscess was obviously absorbed (Figure E and F). After 1 year follow-up, no abnormality was found in the pacemaker bag, and no infection was found again.

Liver abscess caused by pacemaker operation has not been reported before¹. The infection may be caused by the intake of exogenous bacteria during the operation, resulting in bacteremia². Due to pacemaker electrode was adjacent to the liver (Figure C and D), abnormal sinus was formed. Exogenous bacteria led to liver abscess, abdominal pain, fever and other infection symptoms by abnormal sinus³. This case suggests that we should pay the high attention to aseptic operation, the prophylactic application of antibiotics before operation is also quite necessary, and we should also focus on monitoring the temperature, clinical manifestations and related examinations of patients after operation.

Acknowledgment

This work was supported by the Doctor research fund of Shanxi cardiovascular hospital [XYS2020B003].

Author Contributions

All authors have participated in the work and have reviewed and agreed with the content of the article. Fei Hao and Haixiong Wang conceived and interpreted the data. Fei Hao drafted the manuscript. Liping Guo revised it critically.

Reference

1. J B Zeevaert, E Wain, E Louis, L Dorthu, N Meurisse, F Moerman. Liver abscess : case report and literature review. *Rev Med Liege*. 2020; 75(11):731-737.
2. E Reza, R Hasan, A Hossain, M Islam. Outcome of Management of Liver Abscess by Surgical Approach in a Tertiary Care Hospital. *Mymensingh Med J*. 2021; 30(1):85-89.
3. Carine Chagneau-Derode, Christine Silvain. Bacterial liver abscess. *Gastroenterol Clin Biol*. 2004; 28(5):470-476.

