

Far-migration of an intrauterine device in the intrathoracic cavity: A rare case report

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Abstract

The IUD insertion procedure triggers IUD migration. Women with implanted IUDs should be examined to evaluate the device's position regularly.

KEYWORDS

bochdalek hernia, contraception, intrathoracic, intrauterine device, migration

1 | INTRODUCTION

This study aimed to discuss an intrathoracic-migrated IUD's clinical presentation and stress the importance of periodic examinations to check the IUD's position. A 65-year-old woman with an asymptomatic, far-migrated intrathoracic IUD was detected incidentally. There was no abdominal pain, abnormal bleeding, dyspnea, or any chest discomfort. The patient underwent an IUD placement after her second delivery about thirty years before. Moreover, the physical examination and routine laboratory tests were conducted within normal limits. Our results showed an opaque and spiral-shaped shadow based on a plain thorax X-ray. It indicated by an IUD that located in the left lower thorax. Computerized tomography of the thoraco-abdominal cavity showed rounded, hypodense lesions with slippery edges in the left posterior mediastinum. These findings showed a bochdalek hernia, a hyperdense, spiral-shaped inferior aspect of the lesion by the IUD assessment. The periodic examination was necessary after IUD

placement to its location. In this case, the patient refused further surgery for being asymptomatic.

The intrauterine device (IUD) is widely used contraception worldwide.¹ Generally, IUD use is safe; however, on rare occasions, the IUD can migrate, leading to severe complications.² IUD migration refers to the device's movement from its normal position in the uterine fundus. Abdominal pain, abnormal bleeding, pelvic inflammatory disease, expulsion, retraction into the cervix or uterus, and uterine perforation are complications after IUD.^{3,4} The prevalence of uterine perforation is 0.05-1 cases from 1000 IUD placement.⁵⁻⁷ IUD induces migration in the intra-abdominal cavity and pelvic after uterine rupture. This condition triggers the severe symptoms such as complications and morbidities.^{7,8} This article highlights a rare case of a woman diagnosed by the IUD migration in the intrathoracic cavity. This paper discusses an intrathoracic-migrated IUD's clinical presentation and stresses the importance of periodic examinations to check the IUD's position.

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2 | CASE REPORT

A 65-year-old woman with a far-migrated intrathoracic IUD was detected incidentally. The woman had been admitted to the outpatient surgery clinic after undergoing a thorax X-ray for her medical check-up. She denied abdominal pain, abnormal bleeding, dyspnea, or any chest discomfort. She underwent an IUD placement about thirty years ago after her second pregnant. Moreover, she underwent no follow-up examinations and had not replaced the IUD after IUD placement.

The physical examination and routine laboratory tests were conducted within normal limits. There was an opaque spiral-shaped shadow that located in the left lower thorax according to a plain thorax X-ray (Figure 1). Computerized tomography of the thoraco-abdominal showed a rounded and several hypodense lesions with slippery edges in the left posterior mediastinum. These findings suggested a bochdalek hernia, a hyperdense, and a spiral-shaped inferior aspect of the lesion after the IUD placement (Figure 2). Furthermore, we conducted a surgical removal of the IUD, but the patient refused because she had been asymptomatic.

3 | DISCUSSION

IUD is safe long-term contraception for women worldwide. Complications from IUD insertion are classified as delayed and immediate. Some complications such as lower abdominal pain, uterus perforation, vaginal bleeding, and vagal reaction were occurred after the IUD placement. Moreover, delayed complications include menometrorrhagia, dysmenorrhea, IUD expulsion, ectopic pregnancy, pelvic infections, and IUD migration.⁹ IUDs typically migrate to the

adnexa, appendix, bladder, colon, peritoneum, omentum, rectosigmoid, small bowel, and iliac vein.² There are no previous studies about the IUD migration in the intrathoracic cavity.

All patients were experienced with IUD migration and asymptomatic. The mechanism of the IUD's migration to the intrathoracic cavity was poorly understood. It was caused by uterine perforation and triggered migration. The uterine perforation is the most severe complication after the IUD placement. The prevalence is 1.3%-1.6% from 1000 cases.¹⁰ Moreover, several uterine perforations are asymptomatic. Uterine perforation risk factors include the type of IUD, insertion skills, and insertion time. The IUD move freely into many places after IUD placement in the uterus.¹⁰ Our findings demonstrated that the computerized tomography of the thoraco-abdominal cavity was rounded and hypodense lesions with slippery edges in the left posterior mediastinum. These finding suggested a bochdalek hernia, a hyperdense, and a spiral-shaped inferior aspect of the lesion after the IUD assessment.

Bochdalek hernia is recognized as a congenital diaphragmatic defect. A failure in posterolateral diaphragmatic formation causes bochdalek hernia.¹¹ The prevalences of congenital diaphragmatic hernia case are 85. Bochdalek hernia is rare in adults. Some patients with bochdalek hernia remain asymptomatic until adulthood. In this case, the patient with bochdalek hernia led to displacement of abdominal components into the thoracic cavity. The IUD migrated in the thoracic region and the abdominal component; however, the patient reported no symptoms.

Women with implanted IUDs should be examined periodically to check the device's position.¹⁰ In this case, the patient had no follow-up after the IUD implantation. The IUD's migration into the intrathoracic cavity was observed using a simple X-ray in the thorax. The patient underwent a

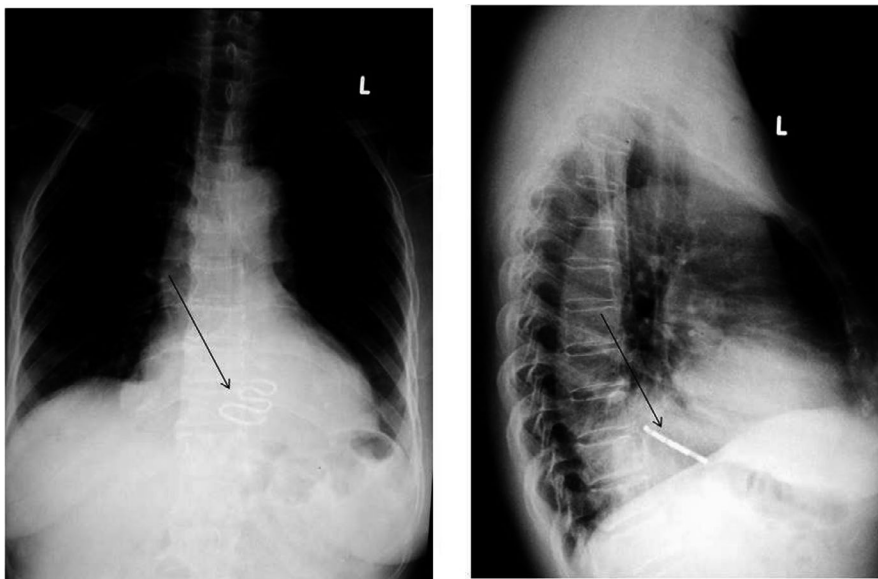
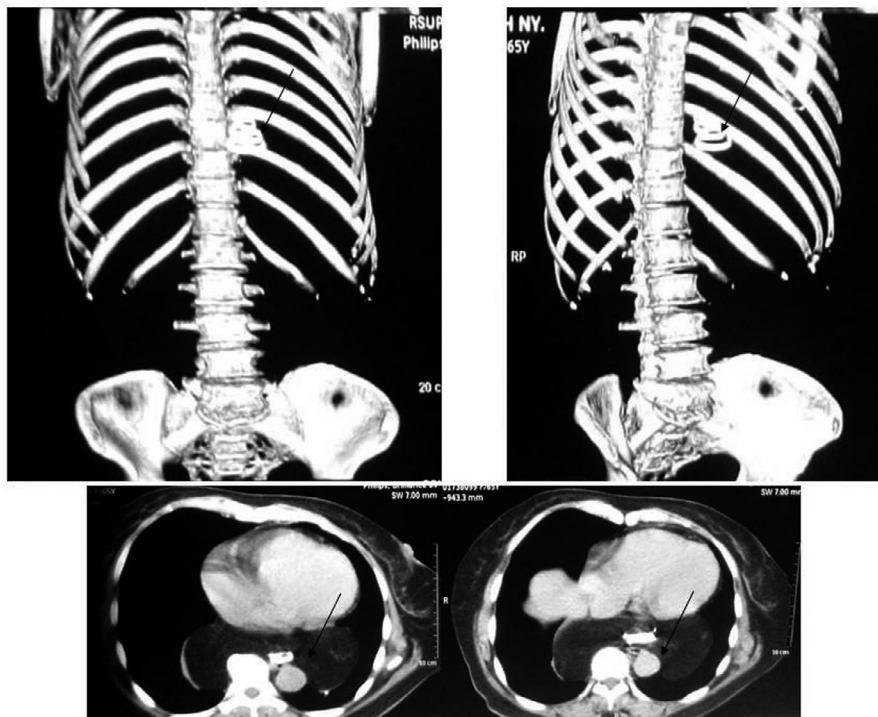


FIGURE 1 An opaque spiral-shaped shadow based on a plain X-ray of the thorax, indicating an IUD (arrow) that located in the mid-left lower thorax

FIGURE 2 Computerized tomography of the thoraco-abdominal shows rounded hypodense lesions with slippery edges in the left posterior mediastinum and a hyperdense, spiral-shaped inferior aspect of the lesion, confirmed to be the IUD (arrow)



computed tomography scan to determine the migrated IUD exact location and related complications. The World Health Organization suggests to remove the migrated device as soon as possible.⁷ In this case, the patient refused surgery because she was asymptomatic.

4 | CONCLUSION

The IUD was a safe and a long-term form of contraception for women worldwide. IUD migration might be contributed as a complication. Periodic examination after IUD evaluation should be conducted.

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CONFLICT OF INTEREST

We declare that we do not have any point of interest.

AUTHOR CONTRIBUTIONS

Fadli RA: corresponding author, data collection, writing, and finalization of the manuscript. Rizka F: preparing the manuscript and image evaluation.

ETHICAL STANDARD

All procedures were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2008 (5).

HUMAN AND ANIMAL RIGHTS

This article is a case report which using 65-year-old woman as research subject.

INFORMED CONSENT

Informed consent was obtained from the patient for being included in the study.

DATA AVAILABILITY STATEMENT

All data generated or analyzed during this study are included in this paper.

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