Case report

A sewing needle in liver: a case report and review of the literature

Quan Zhou Feng1*, Jie Wang2 and Hong Sun3

Address: 1Clinical Division of Nanlou, Chinese PLA General Hospital, Fuxing Road 28, Beijing, 100853, China, 2Department of Ultrasound, Chinese PLA General Hospital, Fuxing Road 28, Beijing, 100853, China and 3Department of Radiology, Chinese PLA General Hospital, Fuxing Road 28, Beijing, 100853, China

Email: QZF* - fqz301@yahoo.com; JW - wangjie@301hospital.com.cn; HS - shunhong1203@yahoo.com.cn

* Corresponding author

Published: 1 June 2009
Received: 11 March 2009
Accepted: 2 April 2009

Cases Journal 2009, 2:6520 doi: 10.1186/1757-1626-2-6520
This article is available from: http://casesjournal.com/casesjournal/article/view/6520
© 2009 Feng et al; licensee Cases Network Ltd.
This is an Open Access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/3.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Abstract

Introduction: Hepatic foreign bodies are quite rare. A sewing needle as a hepatic foreign body in an old woman is very rare and the managements have been varied.

Case presentation: An old woman was incidentally found to have a sewing needle in her liver on abdominal X-ray. The sewing needle was kept stable in her liver after two years of follow-up. Eleven cases of sewing needle in the liver were reviewed.

Conclusion: Sewing needle as a foreign body in the liver is rare. In general, the sewing needle should be removed through laparotomy or laparoscopy, but a stable and uncomplicated sewing needle in the liver need not be removed.

Introduction

Hepatic foreign bodies are quite rare. A sewing needle (SN) as a hepatic foreign body in an old woman is very rare. The managements have been varied. Herein, we report a 76-year-old woman with a SN in her liver, which was incidentally found on abdominal X-ray during hospitalization for treatment of anemia.

Case presentation

A 76-year-old woman was hospitalized due to the complaint of fatigue. On evaluation, she was found to have anemia. Full blood count revealed the following findings: red blood cell count, 2.33 × 1012/L; hemoglobin, 76 g/L; mean corpuscular volume, 101.7 (normal: 80–100) fl; mean corpuscular hemoglobin, 32.6 (normal: 27–34) pg; reticulocytes, 6.4%; white blood cell count, 6 × 109/L; and platelets, 371 × 109/L. The patient was found to have a serum iron content of 6.4 (normal: 7–32) μmol/L and unsaturated iron binding capacity of 56.1 (normal: 31–51) μmol/L. Liver and kidney function tests were normal. Abdominal x-ray incidentally revealed a metal needle in her superior abdominal area. She had no history of inadvertently swallowing a metal needle and no history of abdominal operation but she recalled that she was acupunctured by a witch doctor because of epigastric pain more than twenty years ago. She was not aware that a needle was left in her body. She had not had epigastric pain for many years. Ultrasound examination showed a 3.5 cm long, needle-like, metal object in the left lobar of the liver (Figure 1: Panels A and B). Computerized tomographic scan validated the metal object as a SN (Figure 1: Panels C and D). She was
diagnosed with nutritional anemia and a SN in the liver. After supplement of iron, vitamin B12, and folacin, her haemoglobin was recovered to a near normal level (92 g/L). She was discharged without removal of the needle because the needle had been in her body for many years, without harm to her health. The needle was kept stable in her liver after two years of follow-up.

Discussion
SN as a foreign body in the liver is rare, so far only 11 cases have been reported in English literature [1–11] (Table 1). The patients have been psychiatric cases [6,9], a pediatric population [8], or ordinary adults [7,10,11] that accidentally swallowed a foreign object. Among them, five cases were children under 14 years old [1,2,4,5,8]. In the six cases of adult patients, five cases were women, which might be attributed to a SN being used more often by a woman than a man. The way by which the SN enters into liver may be transcutaneous, but in 9 of 11 cases reviewed, the SNs migrated to liver through the gastrointestinal tract after the SNs were, inadvertently [6–8,10] or intentionally [9], ingested. The two patients with a SN transcutaneously entering the liver had no clear history. The entering pathway was confirmed by operation in one case [5], and the other had the habit of sticking needles into her body [3], which suggested the needle penetrated into liver transcutaneously.

The patients with a SN in the liver usually have no obvious symptoms except mild epigastric pain which is often neglected. Only two of the eleven cases reviewed were complicated with hepatic abscess, which was secondary to the SNs, migrated from the alimentary tract. The clinical picture in these cases included fever with chills and rigors, abdominal pain, vomiting, and jaundice, and patients needed to be treated with surgical drainage [1,7]. In most cases, the SN in the liver was incidentally detected by X-ray during medical examination.

The management of a SN depends on its location, progression, and existence of any complication. Retrieval methods of a SN include laparotomy [1,5,7,18,11] and laparoscopy [3,4,9]. In most cases (8/11), the SN was surgically removed to avoid complication. Asymptomatic patients without complication need not be treated with immediate operation, but the patient should be followed up. If the SN is stable in the liver without movement, the needle need not be retrieved [6,10].

Table 1. Summarised data on eleven cases of hepatic sewing needles

| Reporter                | Age   | Sex   | Diagnosis of needle | Route to liver | Location | Hepatic Abscess | Treatment method |
|-------------------------|-------|-------|---------------------|----------------|----------|----------------|-----------------|
| Abel RM, et al. [1]     | 11 months | Male | Incidentally        | Stomach        | Right lobe | Yes            | Laparotomy      |
| Crankson SJ [2]         | 2 years  | Male | Incidentally        | Transcutaneous  | Right lobe | No             | No treatment    |
| Saviano M, et al. [3]   | 65 years | Female | Incidentally       | Gastrointestinal tract? | Right lobe | No             | Laparoscopy     |
| Le Mandat-Schultz A, et al. [4] | 11 months | Male | Swallowing history | Transcutaneous  | Left lobe  | No             | No treatment    |
| Nishimoto Y, et al. [5] | 1 year  | Male | Incidentally        | Gastrointestinal tract? | Left lobe  | No             | Laparotomy      |
| Roca B[6]               | 85 years | Female | Incidentally, fever, senile dementia | Duodenum | Right lobe | No             | Laparotomy      |
| Chintamani, et al. [7]  | 26 years | Male | Incidentally        | Duodenum       | Right lobe | Yes            | Laparotomy      |
| Azili MN, et al. [8]    | 14 years | Female | Swallowing history | Stomach        | Right lobe | No             | Laparotomy      |
| Lanitis S, et al. [9]   | 35 years | Female | Swallowing history | Duodenum       | Left lobe  | No             | Laparoscopy     |
| Rahalkar MD, et al. [10] | 23 years  | Female | Swallowing history | Gastrointestinal tract | Left lobe  | No             | No treatment    |
| Ward A, et al. [11]    | 20 years | Female | Swallowing history | Duodenum       | Left lobe  | No             | No treatment    |
The current patient did not know when the sewing entered into her liver, which was incidentally found and presented no symptoms. The SN remained stable in the liver after two years of follow-up, so was not removed.

**Conclusion**

A SN as a foreign body in the liver is rare. In general, the SN should be removed through laparotomy or laparoscopy, but stable and uncomplicated SN in the liver need not be removed.

**Abbreviations**

SN, sewing needle.

**Competing interests**

The authors declare that they have no competing interests.

**Authors’ contributions**

QZF, JW and HS were involved in the patient care, acquisition of data, analysis and interpretation of data. QZF was involved in review of literature and drafting the manuscript. All authors have read and approved the final manuscript.

**Consent**

Written informed consents were obtained from the patient for publication of this case report and accompanying image. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

**References**

1. Abel RM, Fischer JE, Hendren WH: Penetration of the alimentary tract by a foreign body with migration to the liver. Arch Surg 1971, 102:227-228.
2. Crankson SJ: Hepatic foreign body in a child. Pediatr Surg Int 1997, 12:426-427.
3. Saviano M, Melita V, Tazzoli G, Farinetti A, Drei B: Videolaparoscopic removal of a foreign body from the liver. Eur J Surg 2000, 166:744-746.
4. Le Mandat-Schultz A, Bonnard A, Belarbi N, Aigrain Y, De Lagausie P: Intrahepatic foreign body laparoscopic extraction. Surg Endosc 2003, 17:1-849.
5. Nishimoto Y, Suita S, Taguchi T, Noguchi S, Jeiri S. Hepatic foreign body - a sewing needle - in a child. Asian J Surg 2003, 26:231-233.
6. Roca B: A sewing needle in the liver. South Med J 2003, 96:616-617.
7. Chintamani, Singhal V, Lubhana P, Durkhere R, Bhandari S: Liver abscess secondary to a broken needle migration—a case report. BMC Surg 2003, 3:8.
8. Azili MN, Karaman A, Karaman I, Erdogan D, Cavusoglu YH, Aslan MK, Cakmak O: A sewing needle migrating into the liver in a child: case report and review of the literature. Pediatr Surg Int 2007, 23:1135-1137.
9. Lanitis S, Filippakis G, Christophides T, Papaconstantinou T, Karaliotou C: Combined laparoscopic and endoscopic approach for the management of two ingested sewing needles: one migrated into the liver and one stuck in the duodenum. J Laparoendosc Adv Surg Tech A 2007, 17:311-314.
10. Rahalkar MD, Pai B, Kukade G, Al Busaidi SS: Sewing needles as foreign bodies in the liver and pancreas. Clin Radiol 2003, 58:84-86.
11. Ward A, Ribchester J: Migration into the liver by ingested foreign body. Br J Clin Pract 1978, 32:263.