Case Report of Granulomatous Peritonitis Due to Foreign Body (Talc)

HIRONARU FUKUSHIMA, MAYUMI FUKUSHIMA, TOSHIHIKO TANAKA AND OSAMU TOKUNAGA

Mizokami Hospital, Ohmachi, Saga 849-21 and Department of Pathology, Saga Medical School, Saga 849, Japan

Received for publication April 26, 1996

Summary: A 40-year-old female came to our clinic to have an examination of a mass in the left lower abdomen. Histology of the removed tumor revealed granuloma caused by talc. This is a very rare case in Japan.

Key words granulomatous peritonitis, pseudocyst, talc, lubrication of surgery gloves

Introduction

It has been reported that talc (magnesium silicate) for lubrication of surgery gloves caused granulomatous peritonitis in extremely rare cases.

We experienced a case of granulomatous peritonitis which might be induced by talc, which we would like to introduce here.

Case Report

Case: A 40-year-old female

Chief complaint: The patient happened to feel a lump in the lower abdomen about 4 months prior to her visit to our clinic.

Past history: She underwent a surgery to separate the ovary to treat her infertility 13 years ago. Then, she experienced 3 pregnancies to have 3 children. Four years ago during the third pregnancy she underwent a surgery of the cervical duct to prevent imminent miscarriage.

Present state on admission: She was 153 cm tall, and her body weight was 42 kg. Neither anemia nor jaundice was recognized.

Chest percussion and auscultation revealed no abnormalities and 8 cm long flat cicatrization after median incision was found in the lower abdomen. In the left lower abdomen a smooth but flexible moving lump with a diameter of 4 cm or so was palpable.

Laboratory tests: Urinalysis; protein (-), glucose(-), occult blood(-); 422 × 10⁴ of WBC, 4200 of RBC, and 11.7 g/dl of hemoglobin.

Abdominal ultrasonography: It was suggested that a solid mass measuring 4.0 × 4.3 cm, covered with a capsule and having an obvious boundary existed 2 cm downwards from the umbilicus in the left abdomen. The lump was partly low echoic and calcified.

CT: A solid mass which was covered with a capsule and whose center was calcified was found to be in contact with
the abdominal wall (Fig. 1).

An exploratory laparotomy was made without an established diagnosis.

Surgical findings: On exploration, neither ascites nor adhesions of the intestine were found. The mass was found on the mesenterium 15 cm apart from the end of ileum and the ileocecal part was in contact with the sigmoid colon, which looked like movable cecum. A 7 cm long ilectomy was made to remove the tumor. No other abnormalities were found in the abdominal cavity.

Extract specimen: Tumor measuring 5.0 × 4.5 × 4.5 cm formed pseudocyst and it was filled with granulation tissue. The tumor was indifferent to the intestine and no abnormalities were found in the intestinal mucosa (Figs 2 and 3).

Histopathologic findings: Histology showed no relationship between the tumor and ileum. Granulation tissue, foreign body giant cells, macrophages

---

Fig. 1. CT findings.

Fig. 2. Resected specimen.

Fig. 3. Cut surface of resected specimen.

Fig. 4. Histological findings.

Talc (arrows) were scattered in granulation tissue.
could be recognized, and foreign bodies which looked like talc were scattered. However, no malignant findings were observed (Fig. 4).

Based on these observations, a diagnosis of granulomatous peritonitis was given to this case.

The patient had excellent postoperative recovery, and lives in good condition even 5 years after the operation.

Discussion

Considering that innumerable abdominal operations have been performed all over the world, and that very few reports have been published on the postoperative difficulty caused by talc, the frequency of granulomatous peritonitis is extremely low. The first report of granuloma caused by talc was reported by Antopol (1933). This brought a recognition that talc is hazardous. In 1940s experiments were made in Europe and U.S.A. to prove the hazards of talc. It was noted that granuloma was formed and that it was difficult to wash out talc completely from surgical gloves.

In Japan the report of such granulomatous peritonitis is hardly available, and no case is found in the literature about the foreign bodies in the abdominal cavity collected by Okura (1959). Though we made a literature survey on the cases of granulomatous peritonitis for the past 30 years, we failed to find out a case of this disease.

In many cases granuloma developed in the greater omentum or the peritoneum, and it took 3 months to 20 years before the disease developed after surgery (Harold, 1990). It is unknown how talc enterd into the peritoneal cavity in our case. It might have entered during operation she underwent 13 years ago or at the time of gynecologic managements during her 3 pregnancies. Since toxicity of talc was reported, it was replaced with starch powder in 1947 in Europe and U.S.A. In Japan starch powder was first applied in 1957. However, the granulomatous peritonitis due to starch powder has been reported by some researchers (Hamaya et al. 1976; Kang et al. 1992).

Now, powder-free gloves are available at present. In Japan starch powder is mostly used for single-use gloves and this disease is not likely to be reported in future.

References


