

DOI : 10.21767/2575-7725.4.4.36

## 8<sup>th</sup> Edition of International Conference on Clinical and Medical Case Reports - Adenocarcinoma of the appendix: case presentation and literature review

**Georgios Velimezis**

Sismanogleio General Hospital, Greece

**Introduction:**

The presentation of a rare case for the attention of younger surgeons. Case Description: A 56 year old female patient who underwent open appendectomy. Appendiceal adenocarcinoma accounts for <0.5% of all gastrointestinal neoplasms. It is extremely difficult to diagnose prior to surgical inspection, and it usually depends on the pathology following appendectomy. Due to the small sample size and range of clinical presentations, the diagnosis of appendiceal carcinoma remains challenging for physicians. Although some literatures associated with mucinous adenocarcinoma of the appendix have been reported, there are few reports about its treatment after relapse based on literature search results. Here, we report such a case, in which the patient underwent the surgery three times associated with the appendiceal adenocarcinoma and review the relevant literature.

The patient was 50 years old, and she underwent appendectomy + laparoscopic removal of an ovarian cyst + peritonectomy in the external hospital on August 29, 2013, due to "right lower abdominal pain for 3 days". The postoperative pathology was as follows: (1) mucinous adenocarcinoma of the appendix; (2) luteal haematoma of the ovary; and (3) metastatic mucinous adenocarcinoma nodule of the peritoneum. On September 6, 2013, she was transferred to our hospital. The PET results showed that the intestinal soft tissues in the ileocecal area were slightly parametrized and that metabolism was slightly active (Fig. 1a). Additional surgery was performed on September 11, 2013, and the surgical method was ileocecal resection + small intestinal mesenteric nodule biopsy + HIPEC (Fig. 1b). The postoperative pathology results were as follows: (1) (mesenteric lymph nodes) 8 lymph nodes, no cancer metastasis (0/8), and 4 cancer nodes; (2) (mesenteric nodule) under the microscope, there were 5 cancer nodules; (3) (colon tumour resection specimen) local erosion of the colon mucosa, infiltration of mucinous adenocarcinoma in the serous layer, infiltration of a large number of inflammatory cells, with multinucleated giant cell reaction, no tumour thrombus in the vasculature, no cancer infiltration in the nerve bundle, and no cancer involvement in two incisional

limbuses; (4) immune group: Ki-67 approximately 10% of cells (+), MH (+), MSH2 (+), MSHB (+), PMS2 (+), CDX2 (+), and HER2 (-) (Fig. 1c, d). Regular chemotherapy was used 12 times after surgery, and the adopted regimen was oxaliplatin + 5-FU. Under general anaesthesia, a laparotomy was performed. During the operation, bilateral attachments were found to be cystic solid tumours, which were fixed to some of the small intestine and rectum, with mucus adhered around and enlarged lymph nodes around the intestine. Abdominal wall mucus was taken intraoperatively for rapid pathology, suggesting that mucus glands were visible in the mucus tissue and the glands with moderate atypia. Rectal metastasis resection + intestinal adhesion lysis + partial intestinal resection + hysterectomy + bilateral fallopian tube + ovariectomy + HIPEC were performed according to the exploration and rapid pathological results. Pipe stapler anastomosis was used in radical operation. The patient recovered smoothly after the operation.

The postoperative pathology was as follows: (rectal specimen) intestinal mucosal infiltration of mucosal adenocarcinoma can be seen at the full thickness of the intestine, with negative margins, and another cancer nodule was present in the mesenteric lymph nodes (0/6); (uterus + double attachments) cervical and bilateral attachments can be found with mucinous adenocarcinoma invasion, and the immunohistochemical results were as follows: CK7 (+), CK20 (+), and CDX2 (+); the results support the origin of the digestive tract (Fig. 1g, h). The patient returned to the hospital for regular review after the operation. To date, the follow-up time is 43 months, and no recurrence or metastasis has been found. Tumour markers of appendiceal mucinous adenocarcinoma can be elevated, such as CA125, CA199 and CEA. Preoperative tumour markers are more consistent with TNM staging. Postoperative tumour markers in patients are positively associated with poor prognosis. Moreover, imaging examination is an important detection method in the diagnosis of appendix mucinous adenocarcinoma. Colonoscopy can be used to biopsy the diseased part, and the diagnosis can be confirmed by pathological examination. MRI and PET-CT combine the metabolic state of the lesion with the anatomical structure, which

**Note :** This work is partly presented at 8th Edition of International Conference on Clinical and Medical Case Reports (August 09-10, 2018 | Madrid, Spain)

is helpful for improving the detection rate of the tumour and guiding the development of the diagnosis and treatment plan.

In any case, at the time of the first operation, the appendix and the adipose tissue around its mesentery should be removed. If any liquid or mucus is found, cytological examination should be performed. Because mucinous adenocarcinoma is prone to intracavitary implantation, care should be taken to protect the surgical field and incision during surgery to avoid breaking the tumour and the surgical field should be repeatedly washed with 0.5% 5-FU solution. In our case, the tumour was positive at the incisional margin of the appendix, and the CEA level increased slightly before surgery. Combined with the PET examination results and after consultation with the patient's family, we decided to perform ileocecal resection + HIPEC, followed by regular chemotherapy after surgery. If negative results are obtained from the intraoperative frozen sections of lymph nodes in and along the appendiceal artery, then right hemicolectomy can be avoided. In addition, a negative incision margin for the appendix can be obtained by simple appendectomy, which can also preserve the function of the ascending colon and the ileocecal valve. If a negative margin is not obtained, ileocecal excision can be performed.

#### Results:

Histological examination of the removed appendix has shown "Adenocarcinoma of the appendix in the base of epithelial adenoma, with negative surrounding lymph nodes". Following the histopathology report the patient has undergone an elective right hemicolectomy at a later stage.

#### Conclusions:

The neoplasms of the appendix are rare (1% of the cases) and are usually expressed as acute appendicitis. Adenocarcinomas correspond to 10% of the cases of tumors of the appendix whereas there are three histological types: mucosal (more often), intestinal (colonic) and Signet-ring cell carcinoma. The treatment always involves surgical intervention, right hemicolectomy, which gives a better five year survival rate (73%) compared to appendectomy (44%). In some cases a simple appendectomy was the treatment of choice if the margins of the tumor stop at the mucosal or submucosal layer. Chemotherapy has not been proved to contribute to treatment.

**Note :** This work is partly presented at 8th Edition of International Conference on Clinical and Medical Case Reports (August 09-10, 2018 | Madrid, Spain)