



Original research

Should we remove the normal-looking appendix during operations for borderline mucinous ovarian neoplasms?: A retrospective study of 129 cases



Aykut Ozcan*, Emrah Töz, Volkan Turan, Cagdas Sahin, Aycan Kopuz, Can Ata, Muzaffer Sancı

Department of Gynecologic Oncology, Tepecik Research and Training Hospital, Izmir, Turkey

HIGHLIGHTS

- If the appendix is grossly normal appendiceal neoplasms are not expected.
- Appendectomy does not provide any advantage on survival of patients with mBOT.
- No recurrence was detected in women who did not undergo appendectomy.
- Routine appendectomy is controversial due to potential complications.

ARTICLE INFO

Article history:

Received 27 February 2015

Received in revised form

31 March 2015

Accepted 11 April 2015

Available online 20 April 2015

Keywords:

Appendectomy

Mucinous borderline ovarian tumour

Invasive mucinous ovarian tumour

Primary mucinous appendix carcinoma

ABSTRACT

Introduction: The aim of this study was to determine how often the appendix is involved or the primary source of cancer in women undergoing surgery for mucinous borderline ovarian tumour (mBOT) or invasive mucinous ovarian tumour (IMOT) and to evaluate whether appendectomy is necessary.

Methods: The hospital database was searched for women who underwent surgery and whose final diagnosis was mBOT, IMOT or mucinous appendix carcinoma between 1998 and 2014.

Results: One hundred and twenty-nine cases were identified, including 69 mBOT, 51 IMOT and nine primary mucinous appendix carcinomas. Of 97 appendectomies performed, nine lymphoid hyperplasia, two mucocele, one carcinoid tumour of the appendix, one mucinous tumour metastasis from the ovary and nine primary mucinous appendix carcinomas were found and all appendices were grossly abnormal. No recurrence was seen during the follow-up period in 28 patients who had no appendectomy performed for grossly normal appendix. Pathologic diagnosis was normal in all 65 patients whose appendix was noted to be grossly normal and who underwent appendectomy. No recurrence was detected during a median follow-up period of 7 years (range 1–16 years). Sensitivity, specificity, positive and negative predictive value of the macroscopic appearance of the appendix were 100%, 86.67%, 56.52% and 100.00%, respectively.

Discussion: If the appendix is grossly normal, it appears unnecessary to perform an appendectomy in patients operated for an adnexal mass and whose frozen section analysis was reported as mBOT or IMOT.

Conclusion: Appendectomy should not be performed if the appendix is grossly normal.

© 2015 IJS Publishing Group Limited. Published by Elsevier Ltd. All rights reserved.

1. Introduction

Mucinous tumours account for 10–15% of all primary ovarian tumours and approximately 80% are benign [1]. They account for up

to 30–50% of borderline ovarian tumours (BOT) and 6–10% of epithelial ovarian cancers. Borderline ovarian tumours are distinguished from ovarian cancer by the absence of stromal invasion and high-grade atypia [2].

Frozen section analysis of the adnexal mass during surgery gives information about the characteristics of masses, but intraoperative frozen section diagnosis of the borderline ovarian tumour has low accuracy and sensitivity. If the diagnosis is mucinous ovarian

* Corresponding author. Department of Gynecologic Oncology, Tepecik Research and Training Hospital, Izmir No:468 Gaziler Street, Konak, Izmir 35120, Turkey.
E-mail address: opdraykutozcan@gmail.com (A. Ozcan).

tumour, staging and debulking surgery is the cornerstone of treatment in invasive mucinous ovarian tumour (IMOT), but it is controversial in mucinous borderline ovarian tumour (mBOT). Mostly, staging surgery is performed because of the low accuracy and sensitivity of frozen section analysis in these patients [3]. However, it remains controversial whether appendectomy should be performed as a routine part of the staging procedure.

MBOTs have been subclassified into two clinicopathologic forms: gastrointestinal-type and endocervical-like tumours. Gastrointestinal type tumours account for 85–90% of mBOTs and they have similar histologic features as primary mucinous carcinomas of the appendix [4]. It can often be difficult to distinguish primary ovarian from metastatic mucinous tumours of the appendix, and therefore, most pathologists maintain that the diagnosis of primary mucinous ovarian neoplasm requires consideration and exclusion of metastases from other gastrointestinal carcinomas [5–7]. Historically, pseudomyxoma peritonei, which is a clinical term for localised or widespread intraperitoneal deposits of extracellular mucin, was thought to be the pattern of spread of a ruptured mucinous tumour of the ovary. However, we now know that the origin of pseudomyxoma peritonei is the appendix [8]. In the light of this findings; some experts recommend routine appendectomy during surgery for mBOT and IMOT and they propose that removing the appendix leads to upstaging of the disease and more accurate diagnosis [9]. In addition, other authors have advocated routine appendectomy in all epithelial ovarian cancer surgeries regardless of histology to exclude isolated metastases from the ovary to the appendix [10,11]. On the other hand, some experts recommend appendectomy only for patients with macroscopic disease in the appendix due to its potential complications [12].

MBOTs are regarded as tumours that originate from the ovary. However, they can present as metastatic disease from another primary tumour, especially from the appendix. For this reason, guidelines often recommend the removal of the appendix in patients with mBOTs [13].

The primary aim of this study was to determine how often the appendix is involved or the primary source of cancer in women undergoing appendectomy at the time of surgery for mBOT or IMOT. The secondary aim was to evaluate whether appendectomy is necessary in women undergoing surgery for mBOT or IMOT.

2. Materials and methods

This retrospective study was performed in the gynaecologic oncology department at Tepecik Training and Research Hospital, Izmir, Turkey. The hospital database was searched for women who

Table 1
Demographic and clinical characteristics of the patients.

	MBOT group (n = 69)	IMOT group (n = 51)	Primary mucinous appendix carcinoma (n = 9)	P-value ^a
Age (years)	40.2 ± 14.2	49.7 ± 13.24	63 ± 10.7	0.001
Parity	2.04 ± 1.08	2.1 ± 1.9	2.5 ± 0.83	NS ^b
Preoperative CA-125 level (IU/ml)	20.5 (3–218)	35.8 (7–500)	95 (9–240)	0.001
Mean tumour diameter (cm)	16.56 ± 7.81	16.20 ± 6.51	8.0 ± 3.28	0.001

Data are shown as mean ± standard deviation (range).

mBOT: Mucinous borderline ovarian tumour.

IMOT: Invasive mucinous ovarian tumour.

P value <0.05 is considered statistically significant.

^a Kruskal–Wallis test.

^b NS, not significant.

underwent surgery for adnexial mass and whose final diagnosis was mBOT, IMOT or mucinous appendix carcinoma between January 1998 and January 2014. Overall, 174 surgeries were performed for mBOT, IMOT or mucinous appendix carcinoma. Of these 174 patients, 129 women with adequate medical data were identified. Cases were excluded if no information was available for pathology or operative reports either electronically or in the paper chart.

Demographic and clinical characteristics, including age, parity, previous appendectomy, preoperative tumour markers, post-operative follow-up, complications and recurrence, were recorded. Follow-up was performed by pelvic examination, ultrasonography, tumour markers and with computerized tomography and magnetic resonance imaging in selected patients. In patients suspected of having recurrent disease, second-look surgery was performed to discover the disease. Operative reports were reviewed for information pertaining to the type of surgery, presence of ascites or mucin, presence of intraoperative rupture and gross appearance of appendix. If there was no information about gross appearance of the appendix in the operative reports, then it was assumed to be normal. Final pathology reports were reviewed for information pertaining to the tumour diameter and final ovarian and appendiceal diagnoses.

Data were analysed using Statistical Package for the Social Sciences version 18.0 (SPSS Inc., Chicago IL, USA). Sensitivity, specificity, positive predictive value, negative predictive value and likelihood ratio for macroscopic appearance of the appendix were calculated. One-way ANOVA tests were used for intergroup comparisons. P-values of less than 0.05 were considered to indicate a significant difference. Descriptive analyses were performed for the study variables.

3. Theory

If the appendix is grossly normal during surgery for an ovarian mBOT or IMOT without evidence of pseudomyxoma peritonei, primary or metastatic appendiceal neoplasm was not expected. If this can be the general practice among surgeons, unnecessary appendectomies may be prevented for mBOT and IMOT.

4. Results

A total of 129 cases with adequate medical data were identified, including 120 primary ovarian tumours and nine primary mucinous appendix carcinomas. All primary ovarian tumours were stage 1 or stage 2 according to the Federation of Gynecology and Obstetrics (FIGO) classification system. Demographic and clinical characteristics of patients are shown in Table 1. Of these 120 patients whose final diagnosis was a primary ovarian tumour, 69 (57.5%) had mBOT and 51 (42.5%) had IMOT pathology.

Of the 69 women with MBOT, the appendix was noted to be grossly normal in 49 (71%) and grossly abnormal in 18 (26%) women, and 2 (3%) appendices were not seen at the time of surgery due to previous appendectomy. Appendectomy was performed in all patients with a grossly abnormal appendix (n:18) and in 28 (57%) of 49 patients with a grossly normal appendix. Appendectomy was not performed in 21 patients with a grossly normal appendix.

Pathologic diagnosis was normal in all 28 patients with a grossly normal appendix and in 10 patients whose appendix was considered abnormal at the time of operation. In eight patients with a grossly abnormal appendix, the final pathologic diagnosis was lymphoid hyperplasia in five patients, mucocele in two and carcinoma of the appendix in one patient (Fig. 1).

Of the 51 women with IMOT, the appendix was noted to be

Download English Version:

<https://daneshyari.com/en/article/4285832>

Download Persian Version:

<https://daneshyari.com/article/4285832>

[Daneshyari.com](https://daneshyari.com)