Case report

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Pseudomyxoma peritonei from independent primary ovarian and appendiceal tumors: a case report

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Pseudomyxoma peritonei (PMP), which involves both the ovaries and appendix, is usually attributed to an appendiceal primary tumor with secondary involvement. However, rare cases may present with synchronous, independent mucinous primaries. Distinguishing between these entities is important because staging, treatment, prognosis, and follow-up may differ according to the primary site. An 83-year-old woman presented with abdominal distension and ascites incidentally discovered during an evaluation for traumatic intracranial hemorrhage. Computed tomography revealed large-volume ascites, a large multilocular cystic mass arising from the left ovary, and a dilated appendix. Diagnostic laparoscopy confirmed the presence of gelatinous ascites, which was consistent with PMP. Histopathological examination revealed ovarian mucinous carcinoma and appendiceal mucinous neoplasms. Immunohistochemistry showed discordant profiles for ovarian (cytokeratin [CK]-7^{+}/paired box 8 [PAX8]$^{+}$/CK-20^{-}/caudal-type homeobox 2 [CDX-2]$^{-}$) and appendiceal (CK-20^{+}/CDX-2^{+}/CK-7^{-}/PAX8^{-}) lesions. Peritoneal tumor cells expressed CK-7 but lacked PAX8, CK-20, and CDX-2 expression, supporting an ovarian-type immunophenotype of the peritoneal disease. The patient underwent diagnostic laparoscopy with left salpingo-oophorectomy and removal of the gelatinous ascites. Two cycles of paclitaxel and carboplatin were administered before interval cytoreductive surgery because of advanced disease, arrhythmia, and poor tolerance to prolonged surgery. Complete cytoreduction was achieved through total hysterectomy, right salpingo-oophorectomy, appendectomy, total parietal peritonectomy, omentectomy, cholecystectomy, splenectomy, and the removal of visible disease, followed by carboplatin monotherapy. After the operation, the patient completed adjuvant carboplatin therapy without grade 3 or higher adverse effects. The patient remained disease-free for 6 months after the completion of chemotherapy.

Keywords: Appendix; Independent primary neoplasms; Ovary; Pseudomyxoma peritonei

Introduction

Pseudomyxoma peritonei (PMP) is a rare malignant peritoneal tumor characterized by adenomucinous peritoneum accompanied by mucinous ascites, with an incidence of two to four cases per million population [1]. PMP primarily originates in the appendix [2,3] and concurrent mucinous tumors of the ovaries and appendix are frequently observed [3-6]. In contrast, PMP of primary

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ovarian origin is very rare, accounting for approximately 2.6% of all cases [7]. Despite their clinical importance, primary sites are often difficult to establish.

Accurate determination of the primary site is important because appropriate staging, treatment including chemotherapy regimens, and prognosis differ depending on the tumor origin. The primary site has implications for staging, prognosis, and treatment selection [2,8]. Primary ovarian PMP is exceptionally rare, and its prognosis and optimal management remain uncertain.

As PMPs occurring simultaneously in both the ovary and appendix are also very rare, there is no established approach for precise evaluation. The clinical characteristics and optimal staging approaches or treatment strategies based on the site are unclear. Five true synchronous independent primary PMP cases with confirmed immunohistochemistry (IHC) or molecular genetic data have been reported to date. Here, we report an additional case and provide a focused review of all six cases. To the best of our knowledge, this is the first report of an ovarian and appendiceal mucinous carcinoma associated with PMP.

Case

Ethics statement: This study was approved by the Institutional Review Board (IRB) of Chung-Ang University Hospital (IRB No: 2604-026-19625). Informed consent was waived because this study was a retrospective case report involving three or fewer patients and described routine clinical practice without any patient-identifiable information. According to the Bioethics and Safety Act, such case reports are not considered human subject research requiring informed consent.

An 83-year-old multiparous woman presented with abdominal distension that was discovered incidentally during an evaluation for mild traumatic intracranial hemorrhage in the neurosurgery department. Following initial abdominal radiography, abdominopelvic computed tomography (CT) revealed large-volume ascites and a multilocular cystic mass measuring approximately 17 cm in size in the lower abdomen. The mass appeared to originate from the left ovary and showed heterogeneous internal attenuation without enhancing mural nodules, suggestive of an ovarian mucinous tumor (Fig. 1A, 1B). When the CT scan was reviewed after surgery, an additional tubular cystic lesion was identified in the right lower quadrant adjacent to the terminal ileum. The lesion was contiguous with the cecum, suggesting an appendiceal origin. The appendix was diffusely dilated (1.6 cm in diameter) without enhancing mural nodules, calcification, or definite evidence of rupture, which are findings suggestive of a low-grade appendiceal mucinous neoplasm. No direct continuity between the ovarian and appendiceal lesions was identified on CT (Fig. 1C, 1D). Serum carbohydrate antigen (CA)-125 and CA 19-9 levels were elevated to 55.0 U/mL and 63.4 U/mL, respectively.

Drainage of the ascites for further evaluation was unsuccessful for unknown reasons. Diagnostic laparoscopy revealed a large volume of gelatinous greenish fluid throughout the abdominal cavity and a multiseptated left ovarian cystic tumor with partial rupture (Supplementary Fig. 1A–1H). Although appendiceal enlargement was observed (Supplementary Fig. 1H), the appendix appeared to be separate from the ovarian mass. Given the large size and rupture of the left ovarian tumor, the PMP was considered to have originated from it. Left salpingo-oophorectomy was performed, and the gelatinous ascites was removed as completely as possible. During diagnostic laparoscopy, it was technically difficult to aspirate highly viscous gelatinous material. The total operative time was 230 minutes, and the estimated blood loss was 30 mL. The patient had an uncomplicated postoperative course and was discharged on postoperative day 5. Histopathological examination revealed well-differentiated ovarian mucinous adenocarcinoma with peritoneal tumor cell infiltration. Postoperative CT revealed peritoneal thickening and a dilated appendix as previously described.

Due to the advanced stage, uncontrolled arrhythmia, and extensive tumor infiltration, the patient was initially considered unsuitable for prolonged cytoreductive surgery. Following the administration of two cycles of paclitaxel and carboplatin, the patient's condition improved, as evidenced by increased oral intake and an improvement in her Eastern Cooperative Oncology Group performance status from 2 to 1. Multidisciplinary reassessment determined that she could tolerate definitive surgery; interval cytoreductive surgery was subsequently performed, including total hysterectomy, right salpingo-oophorectomy, appendectomy, total parietal peritonectomy with greater and lesser omentectomy, subcutaneous mass removal, cholecystectomy, and splenectomy. The appendix was enlarged intraoperatively (Supplementary Fig. 1I, 1J). Complete cytoreduction (CC-0) was achieved. The surgery lasted for 690 minutes, with an estimated blood loss of 1,100 mL. Postoperatively, the patient required intensive care for 2 days because of atrial fibrillation and pleural effusion. These conditions were controlled with appropriate management, and the patient was discharged on postoperative day 8. Hematoxylin and eosin staining revealed invasive mucinous adenocarcinoma in both the ovarian and appendiceal tumors characterized by atypical gland formation, definite stromal invasion, and associated desmoplastic reaction (Fig. 2A). IHC was performed to determine the primary tumor site. The ovarian tumor showed strong expression of cytokeratin

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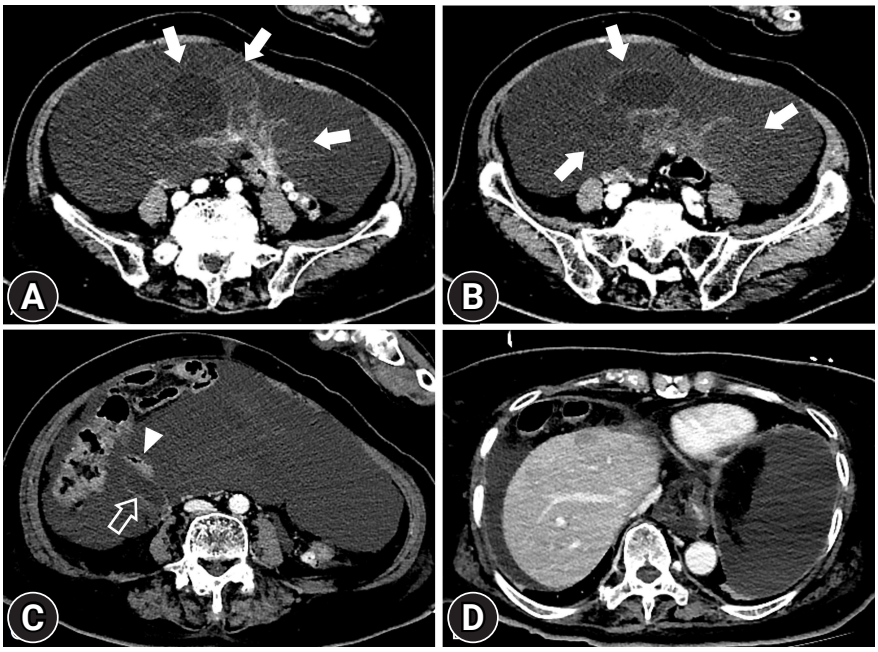


Fig. 1. Computed tomography (CT) features of the pseudomyxoma peritonei associated with synchronous mucinous tumors of the ovary and appendix. (A, B) Contrast-enhanced axial CT images demonstrate large-volume ascites and a large multilocular cystic mass (arrows) in the lower abdomen, appearing to arise from the left ovary. The mass shows heterogeneous internal attenuation without enhancing mural nodules. (C) A tubular cystic lesion (empty arrow) is identified in the right lower quadrant adjacent to the terminal ileum (arrowhead). The lesion is contiguous with the cecum, suggesting an appendiceal origin. The appendix is diffusely dilated without enhancing mural nodules, calcification, or definitive evidence of rupture. (D) No definite scalloping of the hepatic surface is identified.

(CK)-7 and paired box 8 (PAX8) but not of CK-20 and caudal-type homeobox 2 (CDX-2). The appendiceal tumor showed the opposite pattern, with strong CK-20 and CDX-2 expression, but no CK-7 or PAX8 expression (Fig. 2B). Tumor cells infiltrating the peritoneum showed focal CK-7 expression but lacked PAX8, CK-20, and CDX-2 expression, supporting an ovarian-type immunophenotype of the peritoneal disease (Fig. 2). Because the patient experienced grade 3 to 4 hematological toxicity during neoadjuvant paclitaxel-carboplatin therapy, continuation of the doublet regimen was considered to carry a high risk of recurrent toxicity. After multidisciplinary discussions and shared decision-making with the patient and her family, the postoperative chemotherapy was modified to single-agent carboplatin to maintain platinum exposure and reduce treatment-related toxicity. The patient received six cycles of carboplatin monotherapy without grade ≥ 3 adverse effects and remained disease-free for 6 months after completing chemotherapy.

Discussion

Including the present case, the six cases showed moderate-to-strong evidence supporting synchronous independent ovarian and appendiceal mucinous neoplasms associated with PMP (Table 1 [6,9-11]). The patients' ages ranged from 30 to 83 years (median, 59 years). The most common presenting symptoms were abdominal pain, abdominal distension, and a palpable mass. The synchronous presentation of ovarian and appendiceal mucinous neoplasms associated with PMP has historically been a source of diagnostic controversy. Although molecular and clinicopathological evidence suggests that most cases represent primary appendiceal neoplasms with secondary ovarian involvement, a distinct but exceedingly rare subset appears to comprise true synchronous double primary tumors. The present case is notable because both ovarian and appendiceal lesions were diagnosed as mucinous carcinomas, a pattern not previously reported in the other independent cases. Accurate determination of the origins of the primary tumors and peritoneal disease is clinically important because it influences staging and treatment selection.

Although historical reports have relied on morphological discordance, morphology alone cannot reliably distinguish independent primaries from metastatic disease [3,5,6,12,13]. Molecular studies have provided the strongest evidence of true polyclonality. Selected cases demonstrated discordant loss-of-heterozygosity or microsatellite-instability profiles between ovarian and appendiceal le-

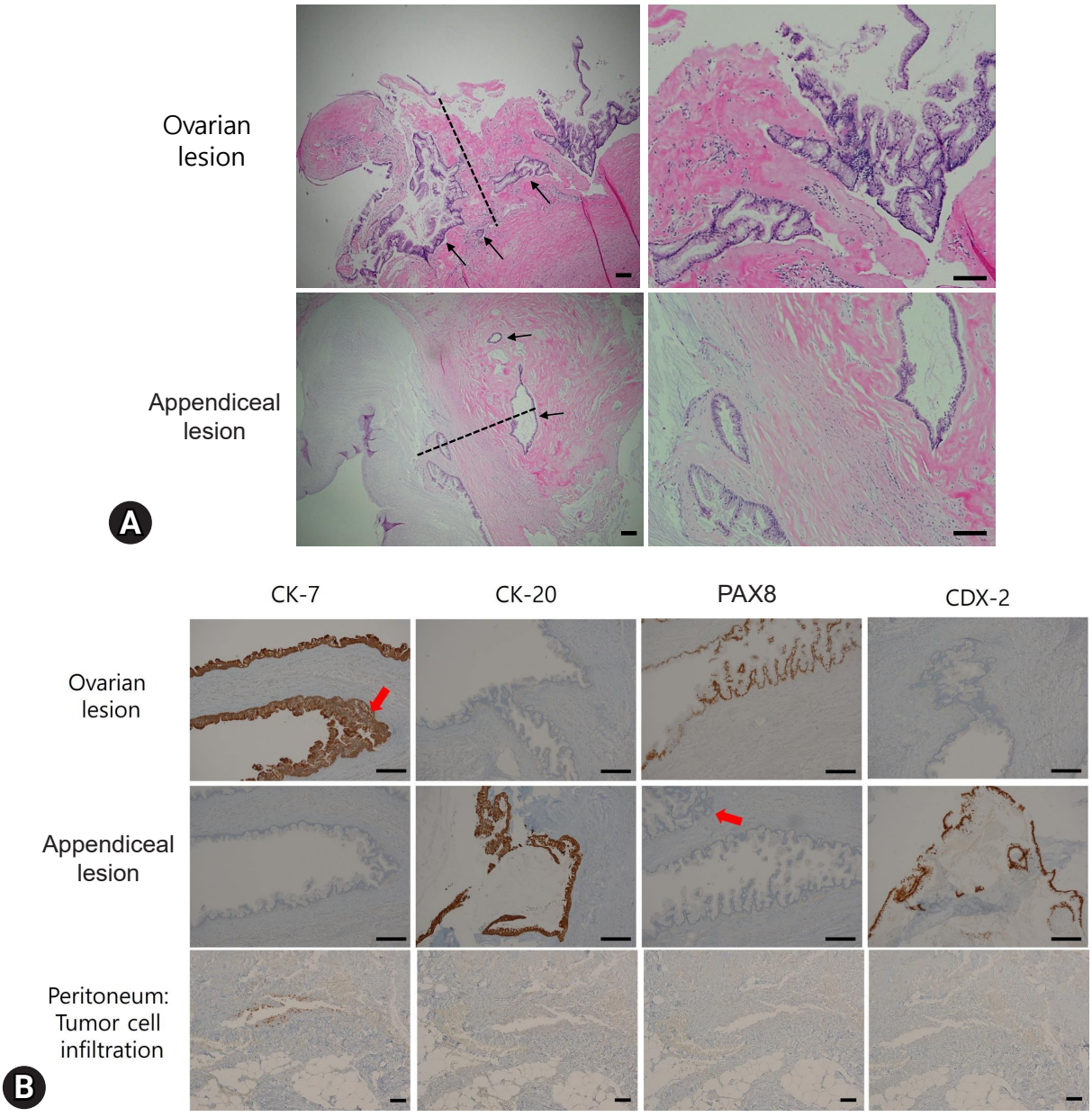


Fig. 2. Histopathological and immunohistochemical findings. (A) Hematoxylin and eosin staining reveals malignant epithelial cells containing intracytoplasmic mucin and forming glandular structures, accompanied by definite stromal invasion extending in a linear distance of >5 mm. The depth of invasion is indicated by a black dashed line. Black arrows point to the invading glandular structures. Scale bar, 500 μm. (B) Representative immunohistochemical staining of the ovarian lesion, appendiceal lesion, and peritoneal tumor-cell infiltration for CK-7, CK-20, PAX8, and CDX-2. The red arrows indicate stromal invasion. Scale bar, 200 μm. CK, cytokeratin; PAX8, paired box 8; CDX-2, caudal-type homeobox 2.

sions, supporting independent origins, whereas identical *KRAS* mutations in paired tumors support a shared clonal origin [3,5,6,14]. Appendiceal mucinous neoplasms often show a CK-20^{+}/CDX-2^{+} intestinal phenotype, whereas ovarian mucinous tumors are generally CK-7 predominant. However, substantial immunophenotypic overlaps exist [15,16]. CK-7 is expressed in most primary ovarian mucinous tumors but may be focal or absent, whereas PAX8 is relatively specific for Müllerian differentiation but has limited sensitivity. In a study by Aldaoud et al. [16], PAX8 was expressed in only 32% of ovarian mucinous neoplasms. Therefore, PAX8 negativity does not exclude ovarian primary tumors. CK-20 and CDX-2 may also be expressed in ovarian mucinous tumors, particularly in those showing intestinal differentiation, although diffuse expression strongly favors a lower gastroin-

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Table 1. Clinicopathologic features of six cases of double primary ovarian and appendiceal mucinous neoplasms associated with PMP

Study	Year	Age (yr)	Symptom	Surgery	Histology		PMP finding	IHC		Molecular findings		Evidence strength[d]	Limitation
					Ovary	Appendix		Ovary	Appendix	Ovary	Appendix		
Chen and Liu [10]	2026	59	RLQ pain, palpable mass	TAH, BSO, right hemicolectomy	LMP; left	High-grade AMN; 12.0 cm	Cellular PMP from appendiceal tumor	CK-7$^+$ PAX8$^+$ CK-20$^-$	CK-20$^+$ Villin$^+$ CK-7$^-$	NR	NR	Moderate	No molecular analysis
Suh et al. [11]	2017	73	Abdominal pain and distension	TAH, BSO, ileocecectomy, OM	LMP; right; 21.8 cm; ruptured	Low-grade AMN; partially amputated	Cellular PMP	CK-7$^+$ CDX-2$^-$ CK-20$^-$	CK-20$^+$ CDX-2$^+$ CK-7$^-$	NR	NR	Moderate	No molecular analysis
Zhou et al. [9]	2015	30	Lower abdominal distension	LSO, appendectomy	Recurrent mucinous tumor[a]; left; 8.7 cm	Mucinous tumor[a]	Acellular PMP CK-20– CK-7–	CK-7$^+$ CDX-2$^-$ CK-20$^-$	CK-20$^+$ CDX-2$^+$ CK-7$^-$	NR	NR	Moderate	No molecular analysis
Chuaqui et al. [6]	1996	40	Abdominal distension/ pelvic masses	BSO, appendectomy	LMP; bilateral	Carcinoma[b] with stromal invasion	NR	NR	NR	MSI (17q)	MSS (17q)	Strong	Lack corroborating IHC data
		59	Abdominal distension/ pelvic masses	LSO, appendectomy	LMP; left	Carcinoma[b]	NR	NR	NR	MSI (17q), no LOH (5q)	MSS (17q), LOH (5q)	Strong	Lack corroborating IHC data
Current case	2026	83	Abdominal distension	Initial LSO, interval TAH, RSO, appendectomy, OM, TPP, cholecystectomy, splenectomy, and subcutaneous mass excision[c]	Low-grade carcinoma; left; > 10.0 cm; ruptured	Low-grade AMN; 1.6 cm	Cellular PMP Weak focal CK-7$^+$ PAX8$^-$ CDX-2$^-$ CK-20$^-$	CK-7$^+$ PAX8$^+$ CDX-2$^-$ CK-20$^-$	CK-20$^+$ CDX-2$^+$ CK-7$^-$ PAX8$^-$	NR	NR	Moderate	No SATB2 staining or molecular clonality analysis; peritoneal origin not definitively established

PMP, pseudomyxoma peritonei; IHC, immunohistochemistry; RLQ, right lower quadrant; TAH, total abdominal hysterectomy; BSO, bilateral salpingo-oophorectomy; LMP, low malignant potential; AMN, appendiceal mucinous neoplasm; CK-7, cytokeratin 7; PAX8, paired box 8; CK-20, cytokeratin 20; NR, not reported; OM, omentectomy; CDX-2, caudal-type homeobox 2; LSO, left salpingo-oophorectomy; MSI, microsatellite instability; MSS, microsatellite stable; LOH, loss of heterozygosity; RSO, right salpingo-oophorectomy; TPP, total parietal peritonectomy; SATB2, SATB homeobox 2.
[a]There was no description regarding benign, LMP, or carcinoma, but a detailed description of morphologic discrepancies was provided. [b]To qualify as an appendiceal carcinoma, a lesion showed either destructive invasion of the appendiceal wall or was characterized by the presence of atypical epithelium in the mucosa and markedly atypical mucinous epithelium in the periappendiceal area in the absence of destructive invasion. [c]The patient received two cycles of paclitaxel plus carboplatin before interval cytoreductive surgery and subsequently received six cycles of carboplatin monotherapy.
[d] Evidence strength was categorized based on the available immunohistochemical and molecular evidence.

testinal origin. SATB homeobox 2 (SATB2) provides additional support for appendiceal or colorectal differentiation. SATB2 was expressed in 77.8% of appendiceal mucinous neoplasms, but only in 2.0% of ovarian mucinous neoplasms, corresponding to approximately 98% specificity for distinguishing appendiceal from ovarian mucinous neoplasms in that cohort [16]. In a larger comparative study, the combined interpretation of CK-7 and SATB2 achieved 95.3% diagnostic accuracy in distinguishing primary ovarian mucinous tumors from colorectal and appendiceal neoplasms [15]. Consequently, to determine the tumor's origin conclusively, pathologists interpret results based on a panel of multiple markers rather than relying on the expression of a single marker. Tumor size, laterality, and gross appearance alone are insufficient to establish an ovarian or appendiceal origin [17].

In the present case, the ovarian and appendiceal tumors showed markedly discordant composite immunophenotypes, supporting independent differentiation. The ovarian tumor was CK-7$^+$/PAX8$^+$/CK-20$^-$/CDX-2$^-$, whereas the appendiceal lesion was CK-20$^+$/CDX-2$^+$/CK-7$^-$/PAX8$^-$. However, the attribution of peritoneal disease is less certain. The peritoneal tumor cells showed focal CK-7 expression and lacked expression of PAX8, CK-20, and CDX-2. Although this profile does not match the intestinal phenotype of the appendiceal lesion, focal CK-7 expression alone may be insufficient to establish an ovarian origin. Accordingly, the clonal source of the peritoneal disease remains indeterminate in the absence of SATB2 staining and molecular comparison. Previous reports similarly showed that peritoneal deposits may match the appendiceal tumor, match the ovarian tumor, or remain unclassifiable [9,18,19]. Because classic PMP is usually appendiceal in origin, determining the source of peritoneal disease in suspected dual primary cases may inform classification, follow-up, and treatment planning, although evidence-based management recommendations remain limited.

This study has several limitations. Cases with moderate-to-strong evidence supporting synchronous independent ovarian and appendiceal primaries associated with PMP are rare. Focal CK-7 expression and absence of PAX8 in the peritoneal tumor limited the definitive attribution of the peritoneal disease to the ovarian lesion. In addition, SATB2 staining and molecular comparison of the ovarian, appendiceal, and peritoneal lesions were not performed, and the short follow-up period limits conclusions regarding prognosis and optimal management. This case highlights the fact that when synchronous mucinous tumors of the ovary and appendix associated with PMP are encountered, clinicians must maintain a high index of suspicion for dual-origin processes. A comprehensive IHC panel incorporating CK-7, CK-20, CDX-2, PAX8, and SATB2 may support the differentiation between ovarian and lower gastrointestinal mucinous neoplasms, although no individual marker is definitive. In addition, molecular genetics and peritoneal implant evaluations should be considered to determine the clonal relationship between synchronous lesions.

Supplementary materials

Supplementary Fig. 1 can be found at https://doi.org/10.12701/jyms.2026.43.63.

Article information

Conflict of interest

No potential conflict of interest relevant to this article was reported.

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Author contributions

Conceptualization: EJL, JK, LHN; Data curation: EJL, JK, MKK, RRR, SHC, GHH; Formal analysis: EJL, JK, LHN, GHH; Funding acquisition, Project administration, Resources, Supervision: EJL; Investigation, Methodology: all authors; Validation: EJL, LHN, GHH; Visualization: JK, RRR; Writing-original draft: all authors; Writing-review & editing: EJL, LHN.

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References

1. Feng JN, Hu AJ, Xu L, Liu LL, Liu GZ, Wang JX, et al. Prevalence and incidence of pseudomyxoma peritonei in urban China: a nationwide retrospective cohort study. Eur J Surg Oncol 2022;48:2226–32.
2. Ronnett BM, Kurman RJ, Zahn CM, Shmookler BM, Jablonski KA, Kass ME, et al. Pseudomyxoma peritonei in women: a clinicopathologic analysis of 30 cases with emphasis on site of ori-

gin, prognosis, and relationship to ovarian mucinous tumors of low malignant potential. Hum Pathol 1995;26:509–24.
3. Szych C, Staebler A, Connolly DC, Wu R, Cho KR, Ronnett BM, et al. Molecular genetic evidence supporting the clonality and appendiceal origin of pseudomyxoma peritonei in women. Am J Pathol 1999;154:1849–55.
4. Guerrieri C, Franlund B, Fristedt S, Gillooley JF, Boeryd B. Mucinous tumors of the vermiform appendix and ovary, and pseudomyxoma peritonei: histogenetic implications of cytokeratin 7 expression. Hum Pathol 1997;28:1039–45.
5. Cuatrecasas M, Matias-Guiu X, Prat J. Synchronous mucinous tumors of the appendix and the ovary associated with pseudomyxoma peritonei. A clinicopathologic study of six cases with comparative analysis of c-Ki-ras mutations. Am J Surg Pathol 1996;20:739–46.
6. Chuaqui RF, Zhuang Z, Emmert-Buck MR, Bryant BR, Nogales F, Tavassoli FA, et al. Genetic analysis of synchronous mucinous tumors of the ovary and appendix. Hum Pathol 1996;27:165–71.
7. Yan F, Lin Y, Zhou Q, Chang H, Li Y. Pathological prognostic factors of pseudomyxoma peritonei: comprehensive clinicopathological analysis of 155 cases. Hum Pathol 2020;97:9–18.
8. Chua TC, Moran BJ, Sugarbaker PH, Levine EA, Glehen O, Gilly FN, et al. Early- and long-term outcome data of patients with pseudomyxoma peritonei from appendiceal origin treated by a strategy of cytoreductive surgery and hyperthermic intraperitoneal chemotherapy. J Clin Oncol 2012;30:2449–56.
9. Zhou F, Chen X, Li Y, Huang L. Two independent primary mucinous tumors involving the appendix and ovary accompanied with acellular pseudomyxoma peritonei. Int J Clin Exp Pathol 2015;8:11831–4.
10. Chen L, Liu Y. Case report: synchronous primary high-grade appendiceal mucinous neoplasm and ovarian borderline mucinous cystadenoma: a rare case and diagnostic challenges. Front Oncol 2026;16:1700388.
11. Suh DS, Song YJ, Kwon BS, Lee S, Lee NK, Choi KU, et al. An unusual case of pseudomyxoma peritonei associated with synchronous primary mucinous tumors of the ovary and appendix: a case report. Oncol Lett 2017;13:4813–7.
12. Seidman JD, Elsayed AM, Sobin LH, Tavassoli FA. Association of mucinous tumors of the ovary and appendix. A clinicopathologic study of 25 cases. Am J Surg Pathol 1993;17:22–34.
13. Young RH, Gilks CB, Scully RE. Mucinous tumors of the appendix associated with mucinous tumors of the ovary and pseudomyxoma peritonei. A clinicopathological analysis of 22 cases supporting an origin in the appendix. Am J Surg Pathol 1991;15:415–29.
14. Rudzki Z, Zazula M, Bialas M, Klimek M, Stachura J. Synchronous serrated adenoma of the appendix and high-grade ovarian carcinoma: a case demonstrating different origin of the two neoplasms. Pol J Pathol 2002;53:29–34.
15. Nayanar SK, Markose AJ, Avaronnan M, Dharmarajan A. Origin and survival outcomes of pseudomyxoma peritonei-a retrospective study. J Cancer Res Ther 2024;20:1524–32.
16. Aldaoud N, Erashdi M, AlKhatib S, Abdo N, Al-Mohtaseb A, Graboski-Bauer A, et al. The utility of PAX8 and SATB2 immunohistochemical stains in distinguishing ovarian mucinous neoplasms from colonic and appendiceal mucinous neoplasm. BMC Res Notes 2019;12:770.
17. Yemelyanova AV, Vang R, Judson K, Wu LS, Ronnett BM. Distinction of primary and metastatic mucinous tumors involving the ovary: analysis of size and laterality data by primary site with reevaluation of an algorithm for tumor classification. Am J Surg Pathol 2008;32:128–38.
18. Shen DH, Ng TY, Khoo US, Xue WC, Cheung AN. Pseudomyxoma peritonei--a heterogenous disease. Int J Gynaecol Obstet 1998;62:173–82.
19. Varshney S, Borkar A, Nagarsenkar A, Amonkar S, Naik A. A rare case of pseudomyxoma peritonei: where did its culprit originate? Arch Clin Med Case Rep 2024;8:207–9.