https://doi.org/10.31689/rmm.2024.31.4.353

CASE REPORTS

Diagnostic Challenges and Multimodal Treatment in Primary Peritoneal Cancer: a Case Report

Alina POTORAC[1,2*], Sorin Tiberiu ALEXANDRESCU[1,3], Tudor Razvan GRIGORIE[1,3], Catalin ALIUS[1,3], Adrian DUMITRU[1,4], Polixenia Georgeta IORGA[1,5], Mihai POPESCU[1,6], Monica Mihaela CIRSTOIU[1,2]

Abstract

Peritoneal cancer (PPC), a rare and aggressive malignancy, can develop from the peritoneal lining or as a secondary peritoneal cancer caused by metastases from neighbouring organs such as the ovaries, gastrointestinal tract, or breast. Early identification is still difficult due to its ambiguous signs, ranging from bloating, distension, and stomach pain. Due to their comparable histological and clinical characteristics, PPC and ovarian cancer are frequently misdiagnosed. Advanced imaging, histological investigation, and immunohistochemical markers are essential for accurate diagnosis. In order to control any remaining disease and enhance results, treatment usually encompasses an assortment of therapeutic approaches, such as hyperthermic intraperitoneal chemotherapy (HIPEC) and cytoreductive surgical procedure (CRS). We present a 69-year-old woman who got diagnosed with PPC after first being suspected of having ovarian cancer. The current instance emphasizes how crucial a thorough diagnostic process is to differentiating PPC from related cancers.

Keywords: primary peritoneal cancer, immunohistochemical markers, cytoreductive surgery, hyperthermic intraperitoneal chemotherapy

Rezumat

Cancerul peritoneal (PPC) este definit ca fiind o malignitate rară și agresivă, ce se poate dezvolta ca primar sau ca un cancer peritoneal secundar prin metastaze de la organe vecine, cum ar fi ovarele, tractul gastrointestinal sau sânul. Identificarea timpurie rămâne încă dificilă din cauza semnelor sale nespecifice, care variază de la balonare, distensie și dureri abdominale. Datorită caracteristicilor lor histologice și clinice similare, PPC și cancerul ovarian sunt frecvent eronat diagnosticate. Investigațiile imagistice avansate, examenul histopatologic și markerii imunohistochimici sunt esențiali pentru un diagnostic precis. Pentru a controla boala reziduală și a îmbunătăți rezultatele și prognosticul, tratamentul cuprinde o abordare terapeutică complexă, precum procedura chirurgicală citoreductivă. (CRS) și chimioterapia intraperitoneală hipertermică (HIPEC). Prezentăm cazul unei paciente în vârstă de 69 de ani, inițial suspectată de neoplasm ovarian, care a fost diagnosticată cu PPC. Acest caz subliniază importanța unui proces complex diagnostic pentru a diferenția PPC de diseminările secundare ale cancerelor asociate.

Cuvinte cheie: cancer peritoneal primar, marker imunohistochimici, chirurgie citoreductivă, chimioterapie intraperitoneală hipertermică

[1]Department of Obstetrics and Gynaecology, "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania
[2]Department of Obstetrics and Gynaecology, University Emergency Hospital Bucharest, Bucharest, Romania
[3]Departament of General Surgery, University Emergency Hospital Bucharest, Bucharest, Romania
[4]Department of Pathology, University Emergency Hospital Bucharest, Bucharest, Romania
[5]Department of Oncology, University Emergency Hospital Bucharest, Bucharest, Romania
[6]Department of Anaesthesia and Intensive Care, University Emergency Hospital Bucharest, Bucharest, Romania

*Corresponding author:
Alina POTORAC, 169 Splaiul Independenței, District 5, Bucharest, Romania, 050098
E-mail: alina.potorac@drd.umfcd.ro

INTRODUCTION

There are two forms of peritoneal cancer: primary and secondary. It is an infrequent and severe cancer. While secondary peritoneal cancer results from the spread of cancer from adjacent organs including the breast, gastrointestinal tract, or ovaries, primary peritoneal cancer (PPC) originates from the peritoneal lining itself. Additionally, it may be linked to adenocarcinoma cases in which the primary site is uncertain[1,2]. Abdominal swelling, pain, nausea, vomiting, constipation, bloating, increased frequency of urination, dyspnoea, exhaustion, and inadvertent weight loss are typical signs of peritoneal cancer. Early detection is essential because of the disease's quick progression. The fact that PPC closely resembles ovarian cancer in both pathology and clinical presentation, however, frequently makes this more difficult[3].

Similar histological categories, such as serous carcinoma, endometrioid carcinoma, mucinous carcinoma, clear-cell carcinoma, and others, are used by the World Health Organization (WHO) to classify PPC and epithelial ovarian cancer (EOC)[4-7]. Because of these similarities, a thorough evaluation that includes tumour markers, advanced imaging methods such CT scans, ascitic fluid cytology, and immunohistochemistry is necessary for an accurate diagnosis. Specific diagnostic criteria for PPC have been proposed by the Gynaecologic Oncology Group. These criteria include the following: microscopic examination reveals either no involvement or minimal serosal/cortical invasion of the ovaries, the tumour size is not greater than 5.0 x 5.0 mm, the histology is primarily serous, and the ovaries appear normal in size or exhibit benign enlargement[8].

To bring ovarian, fallopian tube, and peritoneal malignancies under a single classification system, the International Federation of Gynaecology and Obstetrics (FIGO) improved its approach in 2014. The outcome of considerable worldwide deliberation was this adjustment. These tumours are classified as "undesignated" when the primary site – the ovary, fallopian tube, or peritoneum – cannot be identified. Recent molecular and histological evidence indicates that many high-grade serous carcinomas that were previously thought to originate in the ovaries or peritoneum may instead originate at the fimbrial region of the fallopian tube, despite the fact that fallopian tube malignancies were once thought to be uncommon. Consequently, it is possible that the rate of fallopian tube cancer was significantly underestimated[9].

The incidence rate of primary peritoneal cancer (PPC) is around 6.78 per million people, with Black populations seeing the lowest incidence and White populations experiencing the highest. About 10% of pelvic malignancies are serous carcinomas, the most prevalent histological subtype of PPC[10,11].

Malignant mesothelioma is still a very aggressive and deadly illness, although being less frequent. Malignant peritoneal mesothelioma (MPM) accounts for 6% to 20% of mesothelioma cases in the United States, or 600–800 new diagnoses per year, whereas pleural mesothelioma accounts for the majority of cases. Additionally, the retroperitoneal region is the site of origin for about half of leiomyosarcomatous tumors[12,13]. The most common type of peritoneal cancer is secondary peritoneal cancer. It is found in around 75% of cases of ovarian cancer that are diagnosed. Of non-gynaecological malignancies, 45% develop peritoneal metastases later during follow-up, while 55% develop them concurrently with the initial tumour[14,15]. Five to ten percent of colorectal cancer cases have peritoneal involvement at diagnosis, and twenty to fifty percent have metachronous dissemination, while when gastric cancer first appears, its peritoneal spreading rate is approximately 14%[16–18].

The idea that high-grade serous cancers of the ovary, fallopian tube, and peritoneum are closely connected and should be seen as a continuum is supported by the current data. Unless there is clear proof that the ovaries are the source, the long-standing practice of categorizing these malignancies as ovarian in origin is currently being re-examined. Some specialists have suggested referring to serous tumours that originate in the ovary, fallopian tube, or peritoneum as "Müllerian carcinomas." However, because certain cancers can originate from the extra pelvic peritoneum, the name "pelvic serous carcinomas" has generated criticism. The majority of cases are categorized as high-grade serous carcinoma (HGSC), so the preferred term is "serous carcinoma"[19,20].

We report on a 69-year-old woman initially suspected of having ovarian cancer. However, after an extensive diagnostic evaluation, findings indicated primary peritoneal cancer (PPC) of Müllerian origin. This case underscores the critical importance of thorough test analysis and careful interpretation, particularly when faced with potential confounding factors in diagnosis.

CASE PRESENTATION

A 69-year-old Caucasian female presented to the obstetrics and gynaecology department reporting symptoms of abdominal distension, abdominopelvic pain, and altered bowel habits persisting for approximately one month. Her medical history is notable for grade 2 hypertension, occupational bronchial asthma, and microcalcifications in the left lung. On admission, her vital signs were as follows: blood pressure of 132/79 mmHg, rate of respiration 19 breaths per minute, pulse rate 110 beats per minute, and oxygen saturation on room air of 94–95%. Laboratory tests upon admission revealed thrombocytosis (platelet count = 733 x 10^3/μL), leucocytosis (white blood cell count = 12.5 x 10^3/μL), and elevated serum urea (58.8 mg/dL) (Table 1).

Name	Patient value	Reference ranges
Haemoglobin	12,2 g/dL	10.9-14.3 g/dL
White blood cell count	12,5 x 10^3/μL	3.8-11.8 x 10^3/μL
Platelet count	733 x 10^3/μL	179 - 408 x 10^3/μL
Glucose	111 mg/dL	74 -106 mg/dL
Urea	58.8 mg/dL	17 - 43 mg/dL
Creatinine	0.99 mg/dL	0.51 – 0.95 mg/dL
Alanine transaminase	32 U/L	0-35 U/L
Aspartate transaminase	28 U/L	0-35 U/L
Total bilirubin	0.39 mg/dL	0,3 – 1.2 mg/dL
Direct bilirubin	0.09 mg/dL	0 – 0.2 mg/dL
Cancer antigen 15-3	87.1 U/mL	<28.5 U/mL
Cancer antigen 125	176 U/mL	<35
Cancer antigen 19–9	5.4 U/mL	<27
Alpha-fetoprotein (AFP)	1.53 ng/mL	<7.0
Carcinoembryonic antigen	<0.3	<5
Total protein	5.94 g/dL	6.4-8.3 g/dL
Albumin	3.61 mg/dL	3.5-5 mg/dL

Transvaginal ultrasound revealed moderate ascitic fluid and hyperechogenic nodules suggestive of cellular deposits in the peritoneum. **Contrast-enhanced CT scan of the chest, abdomen, and pelvis** revealed moderate ascites, calcified micronodules in the left lung, a 15 mm left-sided pleural effusion, diffusely steatotic liver, physiologically involuted ovaries, and an oval, iso-dense, non-iodophilic lesion approximately 14 x 16 mm located in the uterine fundus. Additionally, nodular and pseudo nodular densifications were observed in the peritoneal fat, suggesting peritoneal carcinomatosis (Figure 1, Figure 2).

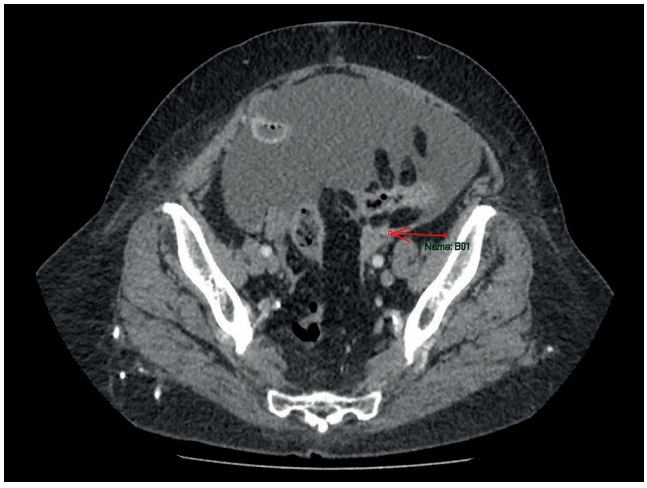

Figure 1. Post-contrast CT in the venous phase, axial section through the right adnexa – shows an irregular contour with ascitic fluid noted anteriorly.

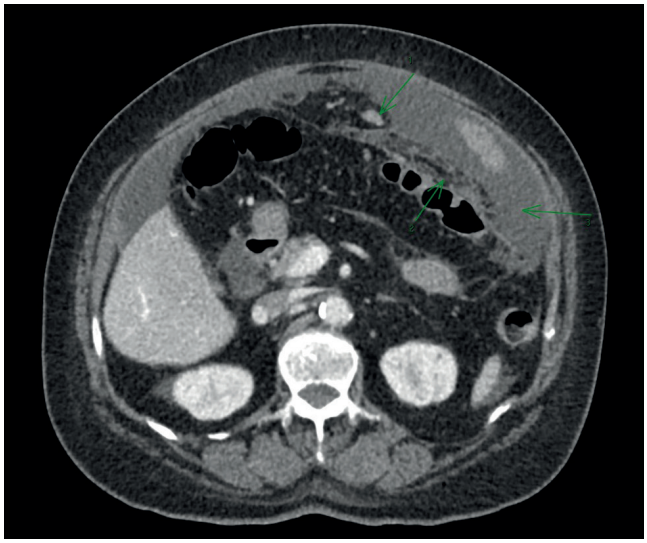

Figure 2. Post-contrast CT in the venous phase, axial section – reveals a juxtacentimetric iodophilic nodule, infiltrative densification of the greater omentum, and ascitic fluid in the pre-visceral space.

Contrast-enhanced pelvic MRI showed a uterus without suspicious focal lesions, a 2 cm hyalinized uterine leiomyoma on the posterior wall, physiologically involuted, ovaries with no suspicious cystic images, moderate ascites, and signs consistent with peritoneal carcinomatosis.

Mammography showed mild diffuse density asymmetry favouring the upper outer quadrant of the left breast, small focal density asymmetries in the medio glandular and retro areolar areas, and benign-appearing calcifications bilaterally — BIRADS 3. **Endoscopy and colonoscopy** were performed, both showing no abnormalities

Laparoscopy was performed, with biopsy samples taken from the omentum and a peritoneal nodule. Histopathological diagnosis confirmed invasion by poorly differentiated (G3) adenocarcinoma, NOS (not otherwise specified). The oncology board recommended neoadjuvant chemotherapy (three chemotherapy sessions with Carboplatin and Paclitaxel), followed by cytoreductive surgery (CRS). A total omentectomy, parietal peritonectomy, splenectomy, appendectomy, and total hysterectomy with bilateral salpingo-oophorectomy were performed, followed by Hyperthermic intraperitoneal chemotherapy (HIPEC) with Cisplatin 150 mg. Histopathological analysis revealed extensive invasion by poorly differentiated adenocarcinoma (G3) in the omentum, peritoneum, splenic capsule and hilum, fallopian tube, ovary, uterine mucosa, and ileocecal appendix. Due to the atypical presentation, a diagnosis of primary peritoneal adenocarcinoma was established by exclusion.

The immunohistochemical expression pattern further supported this diagnosis, aligning with the histopathological findings. The immunohistochemistry profile included strongly positive CK7 (Cytokeratin 7) and WT1 (Wilms tumour protein), negative calretinin and CK 5/6 (Cytokeratin 5/6), and positive BAP1 with preserved expression (Figure 3, Figure 4). These findings collectively favoured a diagnosis of poorly differentiated adenocarcinoma, NOS, most likely originating in the peritoneum.

DISCUSSION

Peritoneal malignancies include a wide range of cancers with different incidences, diagnostic problems, therapeutic options, and prognosis. Their sometimes inconspicuous clinical appearance might cause a delay in diagnosis, as early stages are often asymptomatic or present with non-specific symptoms[14,21,22]. Historically, peritoneal tumours were thought to be fatal. However, advancements in treatment – particularly the association of cytoreductive surgery and hyperthermic intraperitoneal chemotherapy – have improved survival rates significantly. These developments underscore the need for precise imaging features that support comparative diagnosis and correspond closely with the results of surgical and pathological examinations[21].

Differentiating primary peritoneal adenocarcinoma from ovarian peritoneal metastases poses a significant diagnostic challenge due to overlapping clinical and imaging characteristics[23]. One distinctive feature of PPC is the frequent absence of substantial ovarian masses, especially in postmenopausal patients[24,25]. In our case, imaging confirmed physiologically involuted ovaries, with no detectable ovarian tumours on CT or ultrasound, consistent with the patient's age. By contrast, ovarian peritoneal metastases often involve visible adnexal masses on CT or MRI, as ovarian tumours can readily disseminate to the peritoneal cavity due to the lack of an anatomical barrier between the ovaries and peritoneum[9]. Immunohistochemistry further aids in differentiation; in our case, WT1 and CK7 showed strong positivity, findings supportive of PPC. Although WT1 and CK7 positivity are common in both PPC and high-grade serous ovarian carcinoma, PPC's specific immunohistochemical profile, combined with imaging characteristics, strengthens the diagnosis[26].

Metastatic lung cancer and malignant peritoneal mesothelioma (MPM) were excluded as potential diagnoses due to the lack of lung disorder on imaging and the nonexistence of histopathological characteristics typical of these malignancies in biopsy samples. MPM, which is defined by the growth of malignant mesothelial cells throughout the peritoneum, usually appears macroscopically with multiple white nodules dispersed across the parietal peritoneum[12]. These nodules, which often number in the hundreds or thousands, vary in size and consistency. In this case, several peritoneal nodules were seen throughout the peritoneal cavity, necessitating further investigation. MPM is distinguished from other neoplasms, such as metastatic adenocarcinoma, mostly through immunohistochemistry and morphological examination. The International Mesothelioma Interest Group believes that diagnostic indicators with sensitivity or specificity greater than 80% should be prioritized. Calretinin, cytokeratin 5/6 (CK5/6),

podoplanin, and Wilms tumor-1 (WT1) antigen are all common positive markers for epithelioid mesothelioma, and each helps to confirm a clear diagnosis of MPM[27,28]. In this case, immunohistochemical examination revealed that WT1 and CK7 were significantly positive, but calretinin and CK5/6 were negative, with BAP1 expression remaining unchanged. Calretinin and CK5/6 staining were negative, while WT1 was positive, indicating that MPM was not the cause, as these markers are normally positive in mesothelioma.

The best treatment plan for peritoneal cancer is a multimodal approach that includes surgery, chemotherapy, and targeted medicines. Surgical cytoreduction involves resecting all identifiable tumour tissue from the parietal and visceral peritoneal surfaces. This complex surgery includes removal of the damaged organs or tissues as a single unit, as well as a peritonectomy[29,30]. For visceral implants, electrosurgery may be utilized to facilitate resection and control haemorrhage. Hyperthermic intraperitoneal chemotherapy (HIPEC) is often administered post-CRS to address any residual microscopic disease, the agents often used in this procedure being oxaliplatin, doxorubicin, mitomycin C, cisplatin, with treatment durations typically ranging from 60 to 100 minutes[31-33]. In addition to CRS and HIPEC, other therapy options are available for patients who may benefit from a variety of approaches. Early postoperative intraperitoneal chemotherapy (EPIC) is given shortly after surgery, beginning on the first postoperative day and lasting 5 to 7 days, and frequently includes drugs such 5-fluorouracil, taxanes, and leucovorin[34,35]. Pressurized intraperitoneal aerosol chemotherapy (PIPAC) represents a minimally invasive method for delivering intraperitoneal oncological treatment, especially for patients' ineligible for CRS and HIPEC. Often used palliatively, PIPAC can alleviate symptoms and improve the quality of life for patients with significant tumour burdens or persistent ascites[36]. Another novel technique, bidirectional/neoadjuvant intraperitoneal and systemic chemotherapy (BIPSC/NIPS), was developed in Japan. This approach begins with neoadjuvant intraperitoneal and systemic chemotherapy (NIPS) to minimize tumour burden while targeting malignant cells in the stomach and peritoneum. Following NIPS, patients have cytoreductive surgery to remove any remaining tumour lesions, which is followed by hyperthermic intraperitoneal chemotherapy (HIPEC) to destroy remnant cancer cells and reduce the chance of recurrence[37,38]. In this present case, the patient got three cycles of neoadjuvant chemotherapy with carboplatin and paclitaxel, followed by CRS and HIPEC, which is consistent with ideal multimodal therapeutic methods for peritoneal malignancies.

CONCLUSIONS

Differentiating PPC from ovarian cancer remains a clinical and diagnostic challenge due to overlapping characteristics. Extensive assessment, including imaging and immunohistochemistry, is required for a correct diagnosis. The absence of ovarian tumours, combined with the immunohistochemistry profile (positive WT1 and CK7, negative calretinin and CK5/6), confirmed the diagnosis of PPC. CRS and HIPEC have shown encouraging results in the treatment of peritoneal cancers. Emerging medicines like PIPAC and bidirectional intraperitoneal, systemic chemotherapy (BIPSC) broaden therapeutic choices for advanced cases. This case shows the importance of using a tailored technique for diagnosis and treatment in peritoneal malignancies to improve patient outcomes.

Disclosure: None of the authors have a conflict of interest.
All authors have participated equally in developing this study.
The authors declare that all the procedures and experiments of this study respect the ethical standards in the Helsinki Declaration of 1975, as revised in 2008(5), as well as the national law. Informed consent was obtained from the patient.

References

1. Anwar A, Kasi A. Peritoneal Cancer. În: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 [citat 18 octombrie 2024]. Disponibil la: http://www.ncbi.nlm.nih.gov/books/NBK562138/
2. Read by QxMD [Internet]. [citat 18 octombrie 2024]. Peritoneal carcinomatosis from an unknown primary site. Management of 15 patients. Disponibil la: https://read.qxmd.com/read/11401209/peritoneal-carcinomatosis-from-an-unknown-primary-site-management-of-15-patients
3. Shabbir M, Sahni S, Ahluwalia M, Ayinla R. Primary Peritoneal Carcinoma: A Rare Malignancy Presenting a Diagnostic Challenge. Cureus. 17 mai 2022;14(5):e25082.
4. Thakur N, Alam MR, Abdul-Ghafar J, Chong Y. Recent Application of Artificial Intelligence in Non-Gynecological Cancer Cytopathology: A Systematic Review. Cancers. ianuarie 2022;14(14):3529.
5. Kossaï M, Leary A, Scoazec JY, Genestie C. Ovarian Cancer: A Heterogeneous Disease. Pathobiology. 12 octombrie 2017;85(1–2):41–9.

6. WHO classification of tumours of female reproductive organs - NLM Catalog - NCBI [Internet]. [citat 13 octombrie 2024]. Disponibil la: https://www.ncbi.nlm.nih.gov/nlmcatalog/101656343.
7. Baros A, Potorac A, Turcan N, Secara D, Munteanu O, Pariza G, et al. Correlation Between Early Diagnosis of Ovarian Neoplasm and Long-Term Prognosis. Medicina Moderna - Modern Mededicine, 2022 ;29(2). https://doi.org/10.31689/rmm.2021.29.2.115
8. Hattori S, Kajiyama H, Fuji U, Furui Y, Ishibashi Y, Hattori Y, et al. Clinical characteristics of primary peritoneal carcinoma patients: a single-institution experience involving 8 patients. Nagoya J Med Sci. decembrie 2016;78(4):407.
9. Cancer of the ovary, fallopian tube, and peritoneum: 2021 update - PMC [Internet]. [citat 18 octombrie 2024]. Disponibil la: https://pmc.ncbi.nlm.nih.gov/articles/PMC9298325/.
10. Coccolini F, Gheza F, Lotti M, Virzì S, Iusco D, Ghermandi C, et al. Peritoneal carcinomatosis. World J Gastroenterol. 7 noiembrie 2013;19(41):6979–94.
11. Goodman MT, Shvetsov YB. Incidence of Ovarian, Peritoneal, and Fallopian Tube Carcinomas in the United States, 1995–2004. Cancer Epidemiol Biomark Prev Publ Am Assoc Cancer Res Cosponsored Am Soc Prev Oncol. ianuarie 2009;18(1):132.
12. Chun CP, Song LX, Zhang HP, Guo DD, Xu GX, Li Y, et al. Malignant peritoneal mesothelioma. Am J Med Sci. ianuarie 2023;365(1):99–103.
13. Rodríguez D, Cheung MC, Housri N, Koniaris LG. Malignant abdominal mesothelioma: defining the role of surgery. J Surg Oncol. 1 ianuarie 2009;99(1):51–7.
14. Secondary tumors and tumorlike lesions of the peritoneal cavity: imaging features with pathologic correlation - PubMed [Internet]. [citat 18 octombrie 2024]. Disponibil la: https://pubmed.ncbi.nlm.nih.gov/19325052/.
15. Ovarian cancer development and metastasis - PubMed [Internet]. [citat 18 octombrie 2024]. Disponibil la: https://pubmed.ncbi.nlm.nih.gov/20651229/.
16. Peritoneal metastases from extra-abdominal cancer - A population-based study - PubMed [Internet]. [citat 18 octombrie 2024]. Disponibil la: https://pubmed.ncbi.nlm.nih.gov/30139510/
17. Nadler A, McCart JA, Govindarajan A. Peritoneal Carcinomatosis from Colon Cancer: A Systematic Review of the Data for Cytoreduction and Intraperitoneal Chemotherapy. Clin Colon Rectal Surg. decembrie 2015;28(4):234–46.
18. Thomassen I, van Gestel YR, van Ramshorst B, Luyer MD, Bosscha K, Nienhuijs SW, et al. Peritoneal carcinomatosis of gastric origin: a population-based study on incidence, survival and risk factors. Int J Cancer. 1 februarie 2014;134(3):622–8.
19. Crum CP, Drapkin R, Miron A, Ince TA, Muto M, Kindelberger DW, et al. The distal fallopian tube: a new model for pelvic serous carcinogenesis. Curr Opin Obstet Gynecol. februarie 2007;19(1):3–9.
20. Intraepithelial carcinoma of the fimbria and pelvic serous carcinoma: Evidence for a causal relationship - PubMed [Internet]. [citat 18 octombrie 2024]. Disponibil la: https://pubmed.ncbi.nlm.nih.gov/17255760/.
21. Diop AD, Fontarensky M, Montoriol PF, Da Ines D. CT imaging of peritoneal carcinomatosis and its mimics. Diagn Interv Imaging. septembrie 2014;95(9):861–72.
22. Cortés-Guiral D, Hübner M, Alyami M, Bhatt A, Ceelen W, Glehen O, et al. Primary and metastatic peritoneal surface malignancies. Nat Rev Dis Primer. 16 decembrie 2021;7(1):91.
23. Ovarian carcinomatosis: how the radiologist can help plan the surgical approach - PubMed [Internet]. [citat 28 octombrie 2024]. Disponibil la: https://pubmed.ncbi.nlm.nih.gov/23065169/.
24. Levy AD, Arnáiz J, Shaw JC, Sobin LH. From the archives of the AFIP: primary peritoneal tumors: imaging features with pathologic correlation. Radiogr Rev Publ Radiol Soc N Am Inc. 2008;28(2):583–607; quiz 621–2.
25. Piura B, Meirovitz M, Bartfeld M, Yanai-Inbar I, Cohen Y. Peritoneal papillary serous carcinoma: study of 15 cases and comparison with stage III-IV ovarian papillary serous carcinoma. J Surg Oncol. iulie 1998;68(3):173–8.
26. Riedenauer WB von, Janjua SA, Kwon DS, Zhang Z, Velanovich V. Immunohistochemical identification of primary peritoneal serous cystadenocarcinoma mimicking advanced colorectal carcinoma: a case report. J Med Case Reports. 26 noiembrie 2007;1:150.
27. Loss of BAP1 expression is very rare in peritoneal and gynecologic serous adenocarcinomas and can be useful in the differential diagnosis with abdominal mesothelioma - PubMed [Internet]. [citat 29 octombrie 2024]. Disponibil la: https://pubmed.ncbi.nlm.nih.gov/27067777/.
28. Husain AN, Colby T, Ordonez N, Krausz T, Attanoos R, Beasley MB, et al. Guidelines for pathologic diagnosis of malignant mesothelioma: 2012 update of the consensus statement from the International Mesothelioma Interest Group. Arch Pathol Lab Med. mai 2013;137(5):647–67.
29. Mehta SS, Bhatt A, Glehen O. Cytoreductive Surgery and Peritonectomy Procedures. Indian J Surg Oncol. iunie 2016;7(2):139–51.
30. Lungoci C, Mironiuc AI, Muntean V, Oniu T, Leebmann H, Mayr M, et al. Multimodality treatment strategies have changed prognosis of peritoneal metastases. World J Gastrointest Oncol. 15 ianuarie 2016;8(1):67.
31. Aherne EA, Fenlon HM, Shields CJ, Mulsow JJ, Cronin CG. What the Radiologist Should Know About Treatment of Peritoneal Malignancy. AJR Am J Roentgenol. martie 2017;208(3):531–43.
32. Behrenbruch C, Hollande F, Thomson B, Michael M, Warrier SK, Lynch C, et al. Treatment of peritoneal carcinomatosis with hyperthermic intraperitoneal chemotherapy in colorectal cancer. ANZ J Surg. septembrie 2017;87(9):665–70.
33. Alecu L, Tulin A, Slavu I, Orlov-Slavu C, Socea B, Nitipir C. The Controversy of Intraperitoneal Hyperthermic Chemotherapy for Ovarian Cancer. Medicina Moderna - Modern Mededicine, 2020 ;27(4). https://doi.org/10.31689/rmm.2020.27.4.261
34. Goodman MD, McPartland S, Detelich D, Saif MW. Chemotherapy for intraperitoneal use: a review of hyperthermic intraperitoneal chemotherapy and early post-operative intraperitoneal chemotherapy. J Gastrointest Oncol. februarie 2016;7(1):45.
35. Sugarbaker PH, Graves T, DeBruijn EA, Cunliffe WJ, Mullins RE, Hull WE, et al. Early postoperative intraperitoneal chemotherapy as an adjuvant therapy to surgery for peritoneal carcinomatosis from gastrointestinal cancer: pharmacological studies. Cancer Res. 15 septembrie 1990;50(18):5790–4.
36. Kurtz F, Struller F, Horvath P, Solass W, Bösmüller H, Königsrainer A, et al. Feasibility, Safety, and Efficacy of Pressurized Intraperitoneal Aerosol Chemotherapy (PIPAC) for Peritoneal Metastasis: A Registry Study. Gastroenterol Res Pract. 2018;2018:2743985.
37. Seshadri RA, Glehen O. Cytoreductive surgery and hyperthermic intraperitoneal chemotherapy in gastric cancer. World J Gastroenterol. 21 ianuarie 2016;22(3):1114–30.
38. Diagnosis and treatment of peritoneal carcinomatosis - a comprehensive overview - PubMed [Internet]. [citat 29 octombrie 2024]. Disponibil la: https://pubmed.ncbi.nlm.nih.gov/36910885/.