

Synchronous Primary Endometrial and Ovarian Cancers: Pathogenesis, Treatment and Prognosis

Editorial

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Synchronous primary cancers are relatively uncommon in general population.[1] Only 0.5-1.7% of women with gynecological malignancies, have synchronous primary cancers of the female genital tract.[2-6] Among them, the most common combination is synchronous primary endometrial and ovarian cancers.[2,3,5]

The pathogenesis of synchronous primary endometrial and ovarian cancers, remains unclear[5,7] The theory of the secondary Müllerian system has been proposed to explain the development of multiple primary cancers of the female genital tract.[5-9] According to this theory, epithelia of the female genital tract simultaneously respond to a carcinogenic stimulus.[7,8]

Perhaps those patients have a more fragile genome and prior genetic damage may predispose to the development of synchronous primary cancers of the female genital tract.[7,10-14] Thus, embryologic, hormonal or other phenomena may be associated with the development of synchronous primary endometrial and ovarian cancers.[5-10,12]

Systematic surgical staging is the treatment of choice, for most patients with synchronous primary endometrial and ovarian cancers[2,3,5,15-21] More specifically, systematic surgical staging in those patients includes: total abdominal hysterectomy with bilateral salpingo-oophorectomy, total omentectomy, appendectomy, pelvic and para-aortic lymphadenectomy, complete resection of all disease, biopsy of any suspected lesion and pelvic washings.[1,2,5,15-19,21-23]

It is obvious that systematic surgical staging allows a more clear decision for stage related postoperative adjuvant treatment.

[1,17,18] Appropriate surgical staging facilitates targeted therapy that minimize the morbidity of overtreatment (radiation injury, chemotherapy toxicity), the effects of undertreatment (recurrent disease, increased mortality) and maximize survival.[24]

Pelvic and para-aortic lymphadenectomy has diagnostic, therapeutic and prognostic value.[1,22,23] It defines accurately the extent of disease and determines the prognosis of patients.[1] Undoubtedly, it is necessary for the identification of patients with stage III disease. [22,23] The extension of pelvic and para-aortic lymphadenectomy (more than 14 lymph nodes) is an independent risk factor for postoperative complications.[17,18,25-27] Especially in elderly patients and in patients with relevant comorbidities (obesity, diabetes, coronary artery disease), morbidity must be carefully weighed against any survival advantage.[24,28,29]

The significance of postoperative adjuvant treatment in patients with synchronous primary endometrial and ovarian cancers, remains controversial and needs further investigation.[16,20,30] In most cases, postoperative adjuvant treatment should be individualized according to the risk of relapse of each primary cancer. [30,31] Moreover, the treatment of one primary cancer does not compromise the treatment of the other primary cancer.[32]

Especially in patients with unfavorable histologic types, high grade and/or advanced stage disease, required postoperative adjuvant treatment tailored to both tumors.[3,5,15,17-21,30,32-36] More specifically, postoperative adjuvant treatment in those patients includes: radiotherapy and/or chemotherapy.[1,21,30,36]

Postoperative adjuvant radiotherapy includes: external pelvic radiotherapy and/or brachytherapy. It is the appropriate treatment for high risk primary endometrial cancer.[1,17,18]

Postoperative adjuvant chemotherapy is the appropriate treatment for advanced stage primary endometrial and ovarian cancers.[31] The most active chemotherapeutic agents for those patients, are: taxanes, anthracyclines and platinum compounds.[20,21]

Prognostic factors for synchronous primary endometrial and ovarian cancers are: age, grade of endometrial cancer, stage of ovarian cancer and adjuvant treatment.[35,37,38] Patients with synchronous primary endometrial and ovarian cancers have 5-year overall survival 85.9% and 10 year overall survival 80.3%.[16] However, patients with synchronous primary endometrial and ovarian cancers endometrioid type have a better overall survival compared with patients with non-endometrioid or mixed histologic types. [39] Moreover, patients with synchronous primary endometrial and ovarian cancers have better overall survival compared with patients with single primary ovarian cancer.[30,32,35,39]

The reason for the better overall survival of patients with synchronous primary endometrial and ovarian cancers, is not intuitively obvious.[16] Perhaps favorable prognosis related with the detection of patients at early stage and low grade disease.[3,5,11-13,15-34,40]

References

- [1]. Androutsopoulos G, Decavalas G. (2013) Synchronous primary endometrial and ovarian cancers. *J Community Med Health Educ* 3(7): 120.
- [2]. Tong SY, Lee YS, Park JS, Bae SN, Lee JM, et al (2008) Clinical analysis of synchronous primary neoplasms of the female reproductive tract. *Eur J Obstet Gynecol Reprod Biol* 136(1):78-82.
- [3]. Ayhan A, Yalcin OT, Tuncer ZS, Gurgan T, Kucukali T. (1992) Synchronous primary malignancies of the female genital tract. *Eur J Obstet Gynecol Reprod Biol* 45(1):63-6.
- [4]. Matlock D, Salem F, Charles E, Savage E. (1982) Synchronous multiple primary neoplasms of the upper female genital tract. *Gynecol Oncol* 13(2):271-7.
- [5]. Eisner R, Nieberg R, Berek J. (1989) Synchronous primary neoplasms of the female reproductive tract. *Gynecol Oncol* 33(3):335-9.
- [6]. Deligdisch L, Szulman A. (1975) Multiple and multifocal carcinomas in female genital organs and breast. *Gynecol Oncol* 3(3):181-90.
- [7]. Woodruff JD, Solomon D, Sullivant H. (1985) Multifocal disease in the upper genital canal. *Obstet Gynecol* 65(5):695-8.
- [8]. Lauchlan S. (1972) The secondary Mullerian system. *Obstet Gynecol Surv* 27(3):133-46.
- [9]. Sica V, Nola E, Contieri E, Bova R, Masucci M, et al. (1984) Estradiol and progesterone receptors in malignant gastrointestinal tumors. *Cancer Res* 44(10):4670-4.
- [10]. Herrinton L, Voigt L, Weiss N, Beresford S, Wingo P. (2001) Risk factors for synchronous primary endometrial and ovarian cancers. *Ann Epidemiol* 11(8):529-33.
- [11]. Terzakis E, Androutsopoulos G, Grigoriadis C, Zygouris D, Derdelis G, et al. (2010) Synchronous primary endometrial and fallopian tube cancers. *Eur J Gynaecol Oncol* 31(4):467-8.
- [12]. Androutsopoulos G, Adonakis G, Tsamantas A, Liosis S, Antonopoulos A, et al. (2008) Synchronous primary cancers in a woman with scleroderma: a case report. *Eur J Gynaecol Oncol* 29(5):548-50.
- [13]. Decavalas G, Adonakis G, Androutsopoulos G, Gkogkos P, Koumoundourou D, et al. (2006) Synchronous primary endometrial and ovarian cancers: a case report. *Eur J Gynaecol Oncol* 27(4):434-6.
- [14]. Grigoriadis C, Androutsopoulos G, Zygouris D, Arnoyianni N, Terzakis E. (2012) Synchronous squamous cell carcinoma of the endometrium and endometrioid adenocarcinoma of the ovary. *Eur J Gynaecol Oncol* 33(6):666-8.
- [15]. Androutsopoulos G, Adonakis G, Tsamantas A, Andonopoulos A, Decavalas G. (2011) Systemic Sclerosis and Multiple Cancers of the Female Genital Tract: Prolonged Survival following Current Treatment Strategies. *Case Rep Rheumatol* 2011:392068.
- [16]. Zaino R, Whitney C, Brady ME, DeGeest K, Burger RA, et al. (2001) Simultaneously detected endometrial and ovarian carcinomas—a prospective clinicopathologic study of 74 cases: a gynecologic oncology group study. *Gynecol Oncol* 83(2):355-62.
- [17]. Androutsopoulos G, Decavalas G. (2013) Management of endometrial cancer. *International Journal of Translation & Community Medicine* 1(1):101.
- [18]. Androutsopoulos G. (2012) Current treatment options in patients with endometrial cancer. *J Community Med Health Educ* 2(12):e113.
- [19]. Signorelli M, Fruscio R, Lissoni A, Pirovano C, Perego P, et al. (2008) Synchronous early-stage endometrial and ovarian cancer. *Int J Gynaecol Obstet* 102(1):34-8.
- [20]. Chiang Y, Chen C, Huang C, Hsieh C, Cheng W. (2008) Synchronous primary cancers of the endometrium and ovary. *Int J Gynecol Cancer* 18(1):159-64.
- [21]. Liu Y, Li J, Jin H, Lu Y, Lu X. (2013) Clinicopathological characteristics of patients with synchronous primary endometrial and ovarian cancers: A review of 43 cases. *Oncol Lett* 5(1):267-70.
- [22]. Prat J. (2014) Staging classification for cancer of the ovary, fallopian tube, and peritoneum. *Int J Gynaecol Obstet* 124(1):1-5.
- [23]. Pecorelli S. (2009) Revised FIGO staging for carcinoma of the vulva, cervix, and endometrium. *Int J Gynaecol Obstet* 105(2):103-4.
- [24]. ACOG. (2005) practice bulletin #65: management of endometrial cancer. *Obstet Gynecol* 106(2):413-25.
- [25]. Benedetti Panici P, Basile S, Maneschi F, Alberto Lissoni A, Signorelli M, et al. (2008) Systematic pelvic lymphadenectomy vs. no lymphadenectomy in early-stage endometrial carcinoma: randomized clinical trial. *J Natl Cancer Inst* 100(23):1707-16.
- [26]. Franchi M, Ghezzi F, Riva C, Miglierina M, Buttarelli M, et al. (2001) Post-operative complications after pelvic lymphadenectomy for the surgical staging of endometrial cancer. *J Surg Oncol* 78(4):232-7
- [27]. May K, Bryant A, Dickinson H, Kehoe S, Morrison J. (2010) Lymphadenectomy for the management of endometrial cancer. *Cochrane Database Syst Rev* (1):CD007585.
- [28]. Lachance J, Darus C, Rice L. (2008) Surgical management and postoperative treatment of endometrial carcinoma. *Rev Obstet Gynecol* 1(3):97-105.
- [29]. Lowery W, Gehrig P, Ko E, Secord A, Chino J, et al. (2012) Surgical staging for endometrial cancer in the elderly - is there a role for lymphadenectomy? *Gynecol Oncol* 126(1):12-5.
- [30]. Ma S, Zhang H, Sun Y, Wu L. (2009) Synchronous primary cancers of the endometrium and ovary: review of 43 cases. *Chinese-German Journal of Clinical Oncology* 8(2):95-9.
- [31]. Heitz F, Amant F, Fotopoulou C, Battista MJ, Wimberger P, et al. (2014) Synchronous ovarian and endometrial cancer—an international multicenter case-control study. *Int J Gynecol Cancer* 24(1):54-60.
- [32]. Castro I, Connell P, Waggoner S, Rotmensch J, Mundt A. (2000) Synchronous ovarian and endometrial malignancies. *Am J Clin Oncol* 23(5):521-5.
- [33]. Eifel P, Hendrickson M, Ross J, Ballon S, Martinez A, et al. (1982) Simultaneous presentation of carcinoma involving the ovary and the uterine corpus. *Cancer* 50(1):163-70.
- [34]. Sheu BC, Lin HH, Chen CK, Chao KH, Shun CT, et al. (1995) Synchronous primary carcinomas of the endometrium and ovary. *Int J Gynaecol Obstet* 51(2):141-6.
- [35]. Lim Y, Padma R, Foo L, Chia Y, Yam P, et al. (2011) Survival outcome of women with synchronous cancers of endometrium and ovary: a 10 year retrospective cohort study. *J Gynecol Oncol* 22(4):239-43.
- [36]. Pearl ML, Johnston CM, Frank TS, Roberts JA. (1993) Synchronous dual primary ovarian and endometrial carcinomas. *Int J Gynaecol Obstet* 43(3):305-12.
- [37]. Ayhan A, Guvenal T, Coskun F, Basaran M, Salman MC. (2003) Survival and prognostic factors in patients with synchronous ovarian and endometrial cancers and endometrial cancers metastatic to the ovaries. *Eur J Gynaecol Oncol* 24(2):171-4.
- [38]. Song T, Seong S, Bae D, Kim J, Suh D, et al. (2014) Prognostic factors in women with synchronous endometrial and ovarian cancers. *Int J Gynecol Cancer* 24(3):520-7.
- [39]. Soliman PT, Slomovitz BM, Broaddus RR, Sun CC, Oh JC, et al. (2004) Synchronous primary cancers of the endometrium and ovary: a single institution review of 84 cases. *Gynecol Oncol* 94(2):456-62.
- [40]. van Altena A, Geels Y, Bulten J, Kiemeny L, de Hullu J, et al. (2012) Why do women with double primary carcinoma of the endometrium and ovary have a favorable prognosis? *Int J Gynecol Pathol* 31(4):344-51.