

Clinico-epidemiological profile of endometrial carcinoma in Kasr Al Ainy Center of Clinical Oncology & Nuclear Medicine and Fayoum University Hospital and treatment outcomes from January 2012 till December 2016

Thesis

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- This is a retrospective study involving 125 patients who are proven to have endometrial carcinoma and received treatment at Nemrock and oncology unit in Fayoum university hospital from January 2012 to December 2016.
- Several epidemiological & clinical factors were studied as well as prognostic factors & treatment strategies potentially influencing disease-free survival (DFS) and overall survival (OS) in addition to the pattern of recurrences among the study group and different epidemiological, prognostic and treatment strategies influencing the progression free survival.
- Endometrial cancer is mainly a postmenopausal disease. In our study the majority of patients were post menopause, this is consistent with data in literature. **(Soliman et al, 2013).**
- In our study, median age of the study group was 62 years which is consistent with the world wide median age which is 63 years. **(Colombo et al, 2013).**
- The majority of cases in our study presented with abnormal vaginal bleeding (97.6%) and this is consistent with data in literature. **(Kong A et al, 2012).**
- Most of our patients had Comorbidities (71.7 %) mainly hypertension, diabetes milletus, this is consistent with literature for considering those diseases as risk factors. **(Galaal K et al,2014).**
- Some of our patients had positive family history (23.3%) mainly for endometrial and breast cancer which is consistent with literature; Women with a family history of endometrial cancer are at higher risk. **(National Cancer Institute, 2014).**
- Majority of patients were above normal BMI (92.6 %), this is consistent with considering obesity as a risk factor for endometrial cancer. **(Saso et al ,2011).**

- The majority of cases had endometrial carcinoma (type I) about 82.4 % and this is consistent with the literature in which type I endometrial carcinoma represents 75-90 % of endometrial cancer. **(Hoffman et al, 2012).**
- The CA 125 was elevated in 6 patients, it was noticed that 4 patients had advanced disease in form of ovarian metastasis and peritoneal deposits and 1 patient had double primary (endometrial and ovarian cancer), 3 patients had serous papillary type endometrial cancer , although there is no enough patients to have reliable statistics, but those observations are consistent with the literature data in which The tumor marker CA-125 is frequently elevated in endometrial cancer and can be used to monitor response to treatment, particularly in serous cell cancer or advanced disease. **(Coleman et al,2013).**
- The vast majority of our patients underwent surgery (TAH/BSO with or with out lymphadenectomy which is consistent with literature in which The primary treatment for endometrial cancer is surgery; 90% of women with endometrial cancer are treated with some form of surgery. **(Vale et al, 2012).**
- The add of lymphadenectomy didn't add any advantage regarding disease free survival (P value 0.12) and overall survival (0.529) which matches the results of two randomized clinical trials from Europe which reported that routine lymph node dissection did not improve the outcome of endometrial cancer patients, but lymphadenectomy did identify those with nodal disease. **(Kitchener H et al, 2009).**

- that's why Previously, a full standard lymphadenectomy (i.e., dissection and assessment of both pelvic and para-aortic nodes) was recommended for all patients; however, a more selective and tailored lymphadenectomy approach that may include the SLN algorithm is now recommended by the NCCN Panel to avoid systematic overtreatment. **(Soliman PT et al, 2010).**
- The overall survival was significantly higher in patients with early FIGO stages (I, II) compared to those with more advanced stage (**p value 0.014**), which matches the Analysis of SEER data which suggests that survival is increased in patients in patients with early stage disease. **(Chan JK et al, 2011).**
- The overall survival was higher in patients with good performance status ECOG 0, I compared to those with lower performance ECOG II, III, IV (P value was 0.007) although there was no impact on DFS and PFS.
- Radiotherapy didn't improve disease free survival (P value was 0.946) and didn't improve overall survival in our patients (P value was 0.362) which matches three large randomized studies (PORTEC-1, GOG 99 and ASTEC MRC-NCIC CTG EN.5) which failed to demonstrate that radiation improves overall or disease-specific survival. **(ESMO Guidelines, 2011).**
- **The PORTEC-1 trial** suggested that external-beam pelvic RT provides a therapeutic benefit in selected patients with uterine-confined disease. Although RT significantly decreased locoregional recurrence, it did not increase OS. **(Creutzberg CL et al, 2004).**
- **The Keys' trial (GOG 99)** showed that adjuvant pelvic RT improved locoregional control and relapse-free interval (i.e., PFS), without OS benefit. **(Keys HM et al, 2004).**

- The randomized trial (ASTECC/EN.5) suggested that adjuvant pelvic RT alone did not improve either relapse-free survival (i.e. PFS) or OS in patients with intermediate-risk or high-risk early-stage endometrial cancer, but there was a small improvement in pelvic control. **(Blake P et al, 2009).**
- **Both the GOG 99 and PORTEC-1 trials** revealed that most of the initial recurrences for patients with initial uterine-confined tumors were limited to the vagina, prompting the increasing use of vaginal brachytherapy alone as adjunctive treatment. **(Creutzberg CL et al, 2011).**
- The overall survival was higher in patients who didn't receive chemotherapy compared to those who received it (p value 0.002) and this could be contributed to the fact that chemotherapy was given to more advanced diseased patients as overall survival in our patients was higher in early stage diseased patients compared to those with advanced stages (p value 0.014).
- The Asco journal published that the addition of adjuvant chemotherapy to radiation in high risk endometrial cancer patients is associated with improved OS (P value was < 0.001), when compared to RTH alone, CTH has improved OS on multivariate (HR 0.83, 95% CI 0.72-0.96) analysis. **(Dustin Boothe et al, 2016).**
- There was no impact of positive lymphovascular invasion on the overall survival (p value was 0.092) and the disease-free survival (p value 0.105) of our patients and this could be contributed to the limited number of patients
- Patients with low-risk endometrial cancer and LVSI have worse RFS (p=0.002) and OS (p=0.013). **(Ricardo dos Reis et al, 2015).**

- This study was done on 245 patients which is a large number compared to the number of our patients (24 patients).
- Although the 3 y OS in our patients < 60 years was higher than those aged ≥ 60 years, however it was statistically insignificant (P value was 0.699).
- Older endometrial cancer (age >63 years) patients have a significantly decreased overall survival (p <0.001) and greater risk of recurrence following postoperative RT independent of other prognostic factors and/or treatment technique (P values was < 0.001). The impact of treatment-related variables did not alter the age-related outcome. **(Shruti Jolly et al, 2006).**
- The cumulative 3-year survival was 70 % and the overall 5-year survival was 35% and the mean value for survival time was 56.6 months and the median for survival time was 57 months.
- The 5 y OS was higher in patients with early stages (I ,II) , patients younger than 60 years and patients with good performance status (ECOG 0 ,I).
- The cumulative 3-year DFS for the whole group of patients was 45 %, and the 5-year DFS was 37 % and the mean value for survival time was 40.3 months and the median value for survival time was 24 months.
- 28 % of our patients had recurrence, 63.9% had locoregional recurrence and 27.8 % had distant metastasis and 8.3 % had both recurrences, from the locoregional recurrence 38.5 % had vaginal recurrence , from the distant failures , 38.5 % had peritoneal deposits , 27.2 % had stage IA disease , 27.2 % had stage IIIA, 24.2 % had stage IB , 15 % had stage II , 3 % had stage IIIB , 3 % had stage IIIC1 , 80 % of the patients underwent TAH/BSO , 8.3 % underwent TAH/BSO & LND, 5.5% underwent subtotal TAH

/BSO , 5.5% didn't undergo any surgery , instead received definitive alternative treatment (RTH).

- The LVSI was assessed in only 11 % of the patients who recurrence and they were 100 % positive, perineural invasion wasn't assessed in any of the patients, peritoneal cytology was done in 13.9 % of patients; 60% of them had positive peritoneal cytology, 13.9 % had serous papillary type and the rest had endometrioid type.
- The high recurrence rates could be attributed to the fact that lymphadenectomy is not done in the majority of cases which could upstage patients if done also the pathology reports miss a lot of important prognostic factors important for risk stratification of patients including LVSI, perineural invasion, in addition peritoneal cytology are not done in most of patients, this is in addition to percentage of patients who underwent subtotal hysterectomy.
- The cumulative 3-year progression free survival for the whole group of patients who had recurrence or were Stage IV at presentation or had residual disease after surgery was 35.6 % and the 5 y PFS was 0 % and the mean value for the survival time was 24 months and the median for the survival time was 12 months.