



CHAPTER II

LITERATURE REVIEW

Review and related literature

Electronic databases PubMed is searched for citing the articles about comparing the treatment outcomes between ACA and SCC in locally advanced cervical cancer. There are 77 publications for the search terms adenocarcinoma and “locally advanced cervical cancer” and “treatment outcome”. As a result, we got the eighth article which named “Adenocarcinoma: A unique cervical cancer”. Then we manually reviewed all of its references and selected only that were associated with ACA in locally advanced cervical cancer, and compared with SCC. From the selected papers, we searched relevant articles from their references too.

In 1988, Kilgore LC, et al. reported the retrospective study compared a series of patients with adenocarcinoma of all stages in cervix to matched squamous controls and evaluated prognostic feature. Age, race and stage were matched for both histology. There were 162 patients with invasive ACA of the cervix. However, there were only 23 patients of stage II and 7 patients of stage III/IV who compared to 25 patients and 9 patients with SCC in stage II and III/IV, respectively. Patients who were in stage II and III/IV with ACA had 5-year survival rates of 42% and 15% compared to 68% and 18% for those patients of stage II and III/IV with SCC. These were not statistically difference. The authors found that increasing lesion size and tumor dedifferentiation statistically affected survival in stage I patients, but they did not study about them in stage II, III and IV due to their small sample sizes.⁽⁷⁾

In 1989, Kleine W, et al. studied about prognosis of the ACA of the cervical cancer compared in a ratio of 1:2 with SCC comparable with clinical stage, age (± 5 years), treatment year and kind of treatment. There were 144 ACA and 268 SCC for all stages. Five-year survivals of patients with ACA were significantly lower than for those with SCC (53% vs 68%, $p= 0.006$). In an analyses of patients' prognosis according to clinical stage, there was no significant difference between both groups in stages III and IV treated by radiation therapy. No significant difference were found in stage I and II patients treated by radical surgery. The most significant difference in prognosis was seen in stage I and II patients treated by radiation therapy. Five-year survival was 58.6% in stage I ACA compared with 85.0% in SCC. The authors concluded from these results that a discussion of the problem of FIGO staging is more necessary than a discussion of the different radiosensitivities of these two histological types. Since the patients with clinical stage III were 22 patients with ACA, 44

patients with SCC, treated exclusively by radiation therapy show no significant difference, the theory of different radiosensitivities of SCC and ACA cannot be proved.⁽¹¹⁾

Hopkins MP, et al. compared survival rate between ACA and SCC of cervical cancer patients for the time period 1970-1985 and reported their results in 1991. There were 203 patients with ACA and 756 patients with SCC in all stages of cervical carcinoma. Forty patients with stage II ACA had a 47% 5-year survival, compared with 62% of 186 patients with SCC ($p=0.01$). For stage III, there were 25 patients with ACA and 5-year survival was 8%, compared with 114 patients with SCC who had 36% survival ($p=0.002$). However, authors did not report recurrence pattern of patients who were failure from treatment.⁽⁹⁾

In 1999, Chen RJ, et al. evaluated histologic type and age as prognostic factors for 3,678 cervical cancer patients in Taiwan. They found that the younger age group (< 40 years) had higher proportion of cases of ACA ($p=0.0006$). The 5-year survival was lower for patients with ACA than patients with SCC (66.5 vs 74%, $p=0.0009$). The 5-year survival rate for FIGO stages I, II, III, and IV SCC were 81.3, 75.2, 42.7, and 26.1%, respectively, while for ACA they were 75.9, 62.9, 29.2, and 0%, respectively. The difference in survival rate was found mainly in stage I ($p=0.0103$), where radiotherapy was used as the primary treatment. They speculated that this difference was due to the relative ineffectiveness of radiotherapy as a primary treatment in case of ACA.⁽¹⁰⁾

Alfsen GC, et al. reviewed all patients with non-SCC in the Norwegian population for the time period 1966-1990 and reported in 2001. There are 137 patients which were in stage II, III and IV and were treated with radiation therapy alone. Their 5-year overall survival rate was 28%. No significant difference between major subtypes of ACA favored a simplified classification. However, this study did not compare non-SCC to SCC.⁽¹²⁾

In 2004, Baalbergen A, et al. reported prognostic factors of ACA of cervix in Netherlands's patients who treated between 1990 and 1999. There are 55 ACA patients with stage II and 17 patients with stage III. The 5-year survival rates for stage II and III were 37% and less than 9%, respectively.⁽¹³⁾

Gien LT, et al. reviewed about ACA of cervical cancer and was just published in 2010. They reported the difference in pattern of disease dissemination and recurrence.⁽⁶⁾ There are few small retrospective studies which showed that higher incidence of distant recurrence occurred in ACA compared to SCC, including higher rates of ascites, abdominal carcinomatosis, and paraaortic spread.^(8,14) Furthermore, according to Eifel PJ et al., who analyzed 367 ACA patients, the overall distant metastasis rates for stage II and III ACA were dramatically higher than similarly staged SCC

(stage II 46% vs 13% and stage III 38% vs 21%).⁽¹⁴⁾ Subsequently, Eifel PJ et al. reported differences in local and distant recurrence rates in stage IB cancers treated with radiation. ACA had statistically significant increased distant relapse rates compared to SCC regardless of tumor size, while the pelvic relapse rates were no different from SCC.⁽¹⁵⁾ The author concluded that the striking difference in distant recurrence rates after primary treatment raises questions regarding the approaches to locoregional versus systemic treatment for patients with ACA. Consideration should be given to modifying current treatment approach for ACA rather than using a generalized approach for SCC, in an attempt to reduce the distant recurrence rates for this histologic subtype.⁽⁶⁾