Peer Review File

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Reviewer A

Comment 1: There is no definite of evidence ruling out the possibility that the two components represent independent primaries. Although such evidence should ideally be obtained by molecular profiling of the two components, the authors should at very least acknowledge this possibility in the discussion.

Reply 1: We are grateful for the comment and suggestion. Since the two components were very clear at the time of diagnosis, it was only stated in the pathological report that the relationship between the two components was difficult to identify (because the hysteroscopic resection of the tissue was broken). Gynecologists preferred chemotherapy to control the component of choriocarcinoma because it was likely that bilateral lung metastasis had occurred at that time. When the patient's condition was stable, surgical resection was performed. Further molecular detection was not carried out at that time, which was very regrettable. Because of the destruction of the tissue, we initially thought that the description "The two components were intermingled" was relatively objective. However, in the absence of molecular profiling, the evidence for diagnosing endometrial carcinoma with choriocarcinomatous differentiation is limited, and the transitional part of the two components is very important. Therefore, we reviewed the slides of hysteroscopically resected tissues and found a suspicious "transitional area". We modified the description of the relationship between the two components and added the "transitional area" picture to Figure 1B. To be clearer and in accordance with the reviewer's concerns, the relationship between the two components is briefly described in the discussion section combined with the patient's menopause history.

Changes in the text: 1 We have modified the description in the case presentation section (see page 4, lines 2-4). 2 We have added a "transitional area" to Figure 1B. 3 We have added a short discussion to the discussion section (see page 7, lines 4-5, lines 13-16).

Comment 2: The manuscript includes a review of the relevant literature, but it is not clear what current the case adds to what is already published. The impact of this report would be increased if the authors pointed out one or more specific features in the present case that contribute to current knowledge and therefore justify its publication.

Reply 2: Thank you very much for the comments and suggestions. The comments and suggestions do make the article more interesting. Therefore, we have greatly modified the article, especially the discussion section. The specific features of the present case are summarized as follows: 1 The present case is a young nulliparous woman, which is different from the postmenopausal women reported in the literature. 2 The prognosis of this case is relatively good. To date, only 2 cases with survival longer than 36 months have been reported in the

literature. 3 The choriocarcinoma component in this case is more significant than most cases reported in the literature, so this case is treated according to the chemotherapy regimen for choriocarcinoma first, and then surgical resection is performed. Is choriocarcinoma treatment effective for such patients, especially when the choriocarcinoma component is more significant?
Changes in the text: The three features of the above summary are discussed in detail (see Discussion section/paragraphs 1-2, paragraphs 4-5).

Comment 3: Having the manuscript reviewed and edited by someone more knowledgeable of the English language would make it easier to read and increase its quality.
Reply 3: Thank you very much for the comments. Professional English language modifications have been made to the manuscript.
Changes in the text: Modified throughout the text according to the comment.

Reviewer B
Comment 1: Page 1, lines 29-30 and page 2 lines 24-25: The tumor is referred in plural. Was there a single tumor with heterenous differentiation or multiple tumors?
Reply 1: We are grateful for the comment. We thought it was endometrial carcinoma with choriocarcinoma differentiation. However, the component of the choriocarcinoma is indeed significant in our case, which is different from most endometrial carcinoma with focal trophoblast differentiation reported in the literature. We reviewed all the slides of the patient, found some suspicious "transitional area" of the two components, and briefly discussed the relationship between the two components in the discussion section.
Changes in the text: 1 We have modified the description in the case presentation section (see page 4, lines 2-4). 2 We have added "transitional area" picture to Figure 1. 3 We have added a short discussion to the discussion section (see page 7, lines 4-5, lines 13-16).

Comment 2: Page 4, lines 8-9 'Of course, the accumulation… ' This sentence is difficult to understand. You should rephrase it.
Reply 2: Thank you for the comment. We removed the inappropriate description and rephrased it.
Changes in the text: Page 8, Lines 9-10.

Comment 3: Page 4, lines 33-34. Do you mean liver metastasis of choriocarcinoma?
Reply 3: I apologize for the inappropriate description. Since abnormal liver function continued to exist in the postoperative follow-up of the case we reported, this was the point I paid more attention to when I studied the literature in the early stage. However, there is not much information available in the

literature, so we believe that this point can be discussed after more cases are accumulated. We deleted the discussion on abnormal liver function and replaced it with the discussion on the exploration of treatment methods as a feature of our case.
Changes in the text: We have replaced part of the Discussion (see Discussion section/paragraph 5).

Comment 4: This study would be a good addition to the discussion about the genetics of somatic and trophoblastic components:
Acosta AM, Sholl LM, Cin PD, Howitt BE, Otis CN, Nucci MR. Malignant tumours of the uterus and ovaries with Mullerian and germ cell or trophoblastic components have a somatic origin and are characterised by genomic instability. Histopathology. 2020 Nov;77(5):788-797. doi: 10.1111/his.14188.
Reply 4: We are very grateful to the reviewer for the comment and the interesting literature. We carefully studied this literature and cited it in the analysis of pathogenesis. Thank you very much.
Changes in the text: We have cited this document (see page 7, lines 10-13).

Comment 5: Fig 2: C, the image does not represent well-differentiated endometrioid carcinoma but quite solid structures. Also, the exact grade of the endometrioid carcinoma is not mentioned in the text. Was it grade 1 because you refer it as well-differentiated or grade 2 as would be expected from the figures?
Reply 5: Thank you for raising this deficiency. We reviewed the slides and found that the exact grade of endometrioid carcinoma was FIGO grade 1. There are very few solid areas, less than 5%. Therefore, we defined the exact grading of endometrioid carcinoma in this paper and replaced the atypical picture of Figure 2C with the proliferative lesions of the surrounding endometrium.
Changes in the text: 1 We have defined the grading of endometrioid carcinoma throughout the text. 2 We have changed Figure 2C.

Comment 6: I would strongly advise to use language revision.
Reply 6: Thank you very much for the comment. Professional English language modifications have been made to the manuscript.
Changes in the text: Modified throughout the text according to the comment.