Peer Review File

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Review comments

Reviewer A

Please comment on whether or not biopsies were considered or performed. Please add a respective microscopic image from the surgical pathology.
Comment on whether or not termination of pregnancy was considered. Please comment if a breast reduction was considered, or if she was not a candidate due to skin involvement.
Not sure how this case report contributes to the literature that is already available. The authors should use this case as an opportunity to expand on the literature review, i.e. summarize previously published cases, or comment on what the most common management strategies were that were used among the prior publications, or whether or not there is a difference in management strategies depending on pregnancy status or trimester.

Reply: Thank you for taking the time to review our case report. Below are responses to all the helpful comments proposed.
Taking biopsies were considered but not performed given the patient's open breast ulcers and intense pain and given low suspicious malignancy findings, taking biopsies would not have changed our management of this case. We reached out to our pathology colleagues based on this review and have added microscopic images, **Fig 4, Line 272, pg 10**. We also included a surgical pathologist as a co-author who provided the photomicrographs and expertise on the slides in the revised manuscript. Please see **Line 122, pg 5**. We added our reason for forgoing biopsies on **Line 102 pg 4**.

Termination of pregnancy was not considered as the patient desired to keep the viable pregnancy and alternative treatment strategy of bilateral mastectomy was deemed feasible by the multidisciplinary team. This was address **on Line 112 pg 4**

We reported on **Line 127 pg 5, also Line 194 pg 6** That Breast reduction was not offered due to likelihood of being unsuccessful with gestational gigantomastia as a result of its high recurrence rate with ongoing pregnancy.

We agree with the reviewer "that the authors should use this case as an opportunity to expand on the literature review, i.e. summarize previously published cases, or comment on what the most common management strategies that used among the prior publications, , or whether or not there is a difference in management strategies depending on pregnancy status or trimester." We mentioned the two main surgical options under our discussion **Line 194 pg 6.** These are reduction mammoplasty/breast reduction and total mastectomy and summarized various available articles that have studied the management of this unique condition. Although there is limited data on Gestational Gigantomastia, its management is evolving. There is a new surgical technique called bilateral subcutaneous mastectomy (BSCM) with latissimus dorsi muscle flaps (LDF) and free nipple areola complex grafting (FNAG) but this has not been fully studied. However this has increased operative time and therefore risk to patient and fetus and we think further studies on this technique is required so we opted

to not include it in our report. We believe publishing this case of gestational gigantomastia where medical management failed and surgery was successful with collaboration from several medical teams would encourage physicians faced with a similar case. Also under our discussion, **on Line 185, pg 6**, we addressed your last comment on whether or not there is a difference in management strategies depending on pregnancy status or trimester by stating "The timing of surgery should be planned alongside multidisciplinary discussions with the obstetrics and gynecology team. In the first trimester surgical intervention should be delayed to the second trimester if possible. During the second trimester early delivery of the fetus is not optimal and therefore surgical intervention with mastectomy is typically ideal if definitive intervention is deemed necessary. During the third trimester risk versus benefit of early delivery versus surgical intervention should be discussed with a multidisciplinary team. If early delivery is planned attempts should be made to augment fetal lung maturation with medications [11]."

Reviewer B

Very interesting case. I agree with the management as the patient had skin necrosis making immediate breast reconstruction or breast reduction techniques unsafe. I am curious for patients that have less severe cases, is there some regression once the hormones change in later pregnancy? I would just clarify this point.

Reply: Thank you for your comments. There have been only 2 reported case reports that had complete resolution postpartum without any intervention but did not state a correlation with postpartum hormonal level. We modified the text as advised on **Line 169 pg 6.**
There have been hypotheses that during the first or early second trimester, there is a surge of hormones such as estrogen, progesterone, and prolactin that may explain why many gestational gigantomastia cases occur during these periods. However, these hormones are usually within normal when tested like our patient. Hence, it is difficult to make such a conclusion. This was briefly addressed in our discussion from **Line 154 pg 5**.

Reviewer C

I think that the case report deserves to be conveyed but in its current form it is too long and reiterative. I recommend you that it should be shortened keeping important information (despeciation and image). As an example, might be, image of the month or brief report.
In my opinion, the conclusion part is not adequate in the case report.

Reply: Thank you for your comments. We have tried to summarize the case as briefly as possible and only included necessary images for this case study all within the journal's specifications. We have also revised the conclusion as advised on **Line 204 pg 6**.