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Title: Pregnancy associated spontaneous coronary artery dissection - Case report and literature review

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Dear Editor,

Please find enclosed the resubmitted revised manuscript No 60531 titled "Pregnancy associated spontaneous coronary artery dissection - Case report and literature review"

We are extremely grateful to receive the review for our manuscript and we sincerely appreciate the time and efforts put up by the reviewer . We thank the reviewer for the valuable comments to improve our manuscript

The comments and suggestions (as per reviewer as well as editorial office) and our replies are given below. We have taken all comments into consideration and we have answered the questions and revised the manuscript accordingly

I am herewith attaching the revised manuscript and the point-to-point reply to the reviewer comments.

Sincerely,

Kalyan Prudhvi

Reply to Reviewer

1) The manuscript needs a language and format revision.

According to your recommendation, the manuscript has been revised thoroughly for format using the following guideline documents published in Baishideng Publishing group

Guidelines for writing and formatting high quality Case Reports

Format for manuscript revision- case report

Format for authorship, institution, and corresponding author guidelines .

Based on the “ Guidelines for writing and formatting high quality case reports”, the introduction section is expanded to include SCAD definition, literature search methodology, case introduction and need for literature review

References were also formatted appropriately.

The manuscript is thoroughly checked and edited for grammar using english language editing software- Grammarly premium.

2) Please upload a clearer digital version of Figure 1 as well as Figure 2.

We apologize for lack of clear digital version of EKG pictures (Figure 1 and Figure 2) . EKG were scanned into our electronic medical record with this quality and so we have previously uploaded the best quality available. Unfortunately, we are unable to clear digital version. If quality is an issue, we request EKG images may be left out (at editors discretion) as they are not as much relevant compared to the coronary angiogram pictures for this particular article.

In our revised manuscript, we have omitted the EKG pictures and renumbered the Coronary angiogram pictures as Figure 1 and Figure 2

3) I don't think the table in “Predisposing factors for spontaneous coronary artery dissection (SCAD)” is appropriate for this paragraph, please update the relevant content.

We are grateful to the reviewer for this important comment. We agree with the reviewer that it is out of place and have removed the table.

We have also included the following lines to update relevant content in this section.

“Meta-analysis of Genome wise studies has identified a common genetic locus PHACTR1-EDN1 implicated in the development of both Fibromuscular dysplasia(FMD) and SCAD in affected patients [7]. In a PSCAD cohort , Fibromuscular dysplasia was noted in greater than 40% cases of those who underwent imaging

revealing there may be a strong connection between FMD and PSCAD [8,9] Autopsy studies have suggested that SCAD may be an initial manifestation of FMD<sup>[10,11]</sup>”

Note- We have added few references and renumbered the references appropriately to reflect the changes

4) Although the Discussion was well organized, I would like the authors to comment on how it would be applicable in clinic follow-up to reduce the rate of missed diagnosis and to improve the prevention measures especially for the “high-risk” women during the peripartum period

We again are grateful to the reviewer for making this important comment and helping us improve our manuscript. We have added the following lines at the end of discussion session regarding identifying risk factors of recurrent PSCAD and necessary preconceptional counselling for high-risk women in reproductive age group. We have also stressed the importance of careful evaluation to reduce rate of missed diagnosis and management by multidisciplinary team of experts from different specialties.

“Due to the high risk of mortality and morbidity associated with PSCAD, preconceptional counselling is recommended for subsequent pregnancies. Coronary tortuosity, migraine headaches, fibromuscular dysplasia, hypertension are associated with recurrent PSCAD. Careful evaluation, low threshold for coronary angiography referral and early intervention may help reduce the rate of missed diagnosis in high-risk women during the peripartum period. Multidisciplinary care coordinated by team of experts including interventional cardiologists, high-risk obstetrician , internists, Cardiothoracic surgeon and Critical care specialists is essential in managing these patients in the peripartum period<sup>[33]</sup>. Targeted cardiac rehabilitation programs are preferred over strenuous high intensity exercise programs in postpartum women <sup>[34]</sup>.”

Note- We have added few references and renumbered the references appropriately to reflect the changes

Editorial office comments

1. Original picture in PowerPoint format attached for figure 3 and figure 4. Figure 1 and 2 (EKG images) omitted from the manuscript due to poor quality. If current quality is acceptable, we can resubmit the images.

2. PMID and DOI numbers are included in the revised version
3. Case presentation section was re-written according to the Guidelines for manuscript preparation and the necessary sections including A. Final diagnosis B. Treatment C. Outcome and Follow up added

The article is written with the good English-speaking adduction of the arguments. The article is sufficiently novel and very interesting to warrant publication. All the key elements are presented and described clearly. The most discussable options in the article are: 1) Would you please kindly correct all your typos and grammar errors throughout the manuscript. 2) Do you have ECG for this patient (as a picture/ a figure)? Please, describe with numbers (for your lab markers) how exactly diagnosis was made. The reader should have more details and images regarding the diagnosis and your approach to treat. 3) Would you please kindly optimize your vision and elaborate on the ways to treat such a case.

Dear Editor, 1. The manuscript has been thoroughly checked and edited for grammar. Changes are highlighted in red. Incorrect items are stroked-through and replaced where necessary. 2. We apologize for the lack of an EKG figure secondary to a poor quality image scanned into our electronic medical record. Unfortunately, we are unable to provide a clear digital version as mentioned in our earlier correspondence. The patient's EKG was submitted during initial submission and withdrawn with the editor's permission during the first revision. "Physical examination, laboratory examinations and final diagnosis" sections are updated with more information to reflect our approach to diagnosis in this case 3. We are grateful to the reviewer for this comment to improve the presentation of the article at this final stage. The "Treatment" section is now updated and we have elaborated on the decision-making for choosing CABG on a select high-risk patient like ours. The management approach has again been discussed elaborately under the "Treatment and Prognosis" section on Discussion. Please refer to lines 13-25. Kalyan Prudhvi