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Manuscript Type: Case Report

Reviewer #1:

The authors reported a case of ventricular fibrillation (Vf) storm induced by acute coronary syndrome, which was confirmed using optical coherence tomography (OCT). This case report was interesting, but there are several problems to be solved. 1) Coronary angiography and OCT showed the unstable plaque, but this plaque was non-occlusive. Why did the non-occlusive plaque cause Vf storm? I think that coronary spasm play a role of occurrence of Vf storm. The authors should comment on this. 2) According to the OCT findings, there was a non-occlusive thrombus, but as for me, the finding of plaque rupture was not detected. As for me, coronary erosion and the following thrombus formation, due to coronary spasm, seems to be the main mechanism for ACS in the present case. If the authors had the image of plaque rupture in the present case, they had better show them. 3) The authors had better changes words in the "title" from "trigger" from to "cause" or "mechanism".

This was added to the fourth paragraph of the discussion:

In this case, we supposed the arrhythmic storm was caused by multiple transient occlusive coronary spasm triggered by the plaque rupture.

Figure 2 is now larger and reveal better the plaque rupture.

The title was modified as you suggested:

Optical Coherence Tomography to Identify the Cause of an Arrhythmic Storm: a Case Report.

Reviewer #2:

The paper by dr. Couture et al. reports a case in which optical coherence tomography was essential to unmask the cause of an arrhythmic storm after aborted sudden death and a previous non-diagnostic coronary angiography. In this case this methodology was essential to modify the treatment strategy. The case is interesting and well documented and the manuscript well written. There are few point to clarify or revise. 1. Although presumably of short duration, it would be interesting to have information about the follow-up. 2. Since the size of the pictures will be reduced upon publication and they are of paradigmatic importance, I would suggest to subdivide figure 1 A-H into three different figures: figure 1 A-B, figure 2 A-C and figure 3 A-C. 3. Figure legends should be more detailed for the less experienced readership, the arrows should be explained, and panels D and H of the lumen reconstruction during device withdrawal deserve a more in-depth explanation. 4. In the discussion, the last 3 references are cited in an unusual way and they are not in the reference list; PUBMED ID and doi of each reference are required by the editorial rules. 5. I was unable to find the videos

1. This was added to the end of the case description:

Thirteen months later, he is asymptomatic with no recurrent cardiovascular event.

2. We subdivided figure 1 into three different figures to enable a more detailed explanation of each figures.

3. Figure legends, arrows and lumen reconstruction were explained with more details. See figures legends for details.

4. References format have been corrected. See References section.

5. The videos have been sent to the editor by e-mail because the submission website was not able to upload them correctly. Hopefully, you will get access to the videos this time.

Reviewer #3:

This is a rare case report that optical coherence tomography was a useful tool to identify the cause of electrical storm. This manuscript is nicely structured and well written. I have no question about this manuscript.

Thank you for your review.

Reviewer #4:

It is an interesting case report. However, the clinical application of OCT in CAD is no more a novel finding. The OCT supports an emerging technology for performing high-resolution cross-sectional imaging than angio and IVUS. Besides, you should give the lab data and biochemistry including the electrolytes in the article.

This was added to the second paragraph of the case description:

Initial ICU laboratories revealed a hs-TnT of 732 ng/mL as well as normal electrolytes.