Reviewer’s report

Title: Contribution of diffusion-weighted imaging to conventional MRI for detection of haemorrhagic infarction in ovary torsion

Version: 1 Date: 22 Jun 2017

Reviewer: Ankur Goyal

Reviewer’s report:

1. Change 'adnexial ' to 'adnexal'

2. I am not convinced about the utility of DWI in detecting 'hemorrhagic' infarct. Hemorrhage is a confounder in the interpretation of DWI and thus using DWI to detect hemorrhage doesn't make sense. Also the method of interpretation of DWI is objectionable: A strong hypointense signal of the ovary stroma on the b 1000 images or a strong hypointensity (diffusion restriction) on the ADC maps, regardless of the DWI signal, was considered as haemorrhagic infarction.

Hypointense signal on b1000 image cannot be taken as diffusion restriction. Thus the Methodology of image interpretation appears flawed

3. The authors state: Haemorrhagic infarction was found in 15 (51.7%) and nonhaemorrhagic infarction in 14 (48.2%) of the 29 patients, and in 17 patients (14 with nonhaemorrhagic infarction and three with haemorrhagic infarction; 58.6%), the torsed ovary was able to be salvaged in a viable state. So the clinically relevant question is ischemic vs infarcted ovary? can the authors rework the analysis to see how DWI parameters helped in this distinction?

4. What was the time gap between MRI and surgery

5. It would be interesting to know the accuracy of T1 and T2w images combined vs DWI alone

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

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If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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