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Identification of preterm birth based on RQA analysis of electrohysterograms

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Highlights

- We analyzed mechanical activity of uterine muscle to predict preterm labor.
- Group of 20 patients (group A included 10 women delivered after 7 days and group B-10 which delivered within 7 days) were evaluated.
- We used recurrence quantification analysis to extract features for further parameters selection and classification to the appropriate group.
- Selected parameters of recurrence quantification analysis allowed to classify the results in 79.27%, the addition of principal components analysis improves the classification to 83.32%.
- An additional analysis criterion (confidence ellipsoids) designated by the data from PCA matrix allowed to separate both groups.

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