



World-First CW-Doppler Fetal Arterial Blood Flow Wave

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Clinical Abstract

Abstract: The sound output of a CW-Doppler fetal heart sound listener, Doptone, was treated with a frequency demodulation system to get fetal arterial blood flow wave and achieved and published in 1969, it was the world first report of CW-Doppler ultrasound fetal arterial blood flow wave.

Method and results: A frequency-modulated fetal arterial blood flow was listened by the speaker of a CW ultrasonic fetal arterial blood flow listener, Doptone, of which CW ultrasound was 2.5 MHz 20 mW/cm². The author composed a system of frequency demodulator with ICs (integral circuits) and electric output of Doptone was analysed to achieve world first CW Doppler fetal arterial blood flow wave at placental site (Figure 1) [1].

Discussion: The fetal arterial blood flow wave obtained by frequency demodulation is the same as common CW Doppler fetal arterial flow wave and useful as a CW Doppler flow wave.

Although the defect of end diastole or reverse flow function may not be evaluated, it is the same as CW Doppler flow wave. It is the first report of fetal arterial Doppler flow wave, namely, Doppler flow clinically developed after introduction of pulsed Doppler method.

Conclusion: It was the first report of fetal arterial CW Doppler flow wave.

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Received Date: 23 Feb 2019

Accepted Date: 18 Mar 2019

Published Date: 21 Mar 2019

Citation:

Maeda K. World-First CW-Doppler Fetal Arterial Blood Flow Wave. J Res Notes. 2019; 2(1): 1011.

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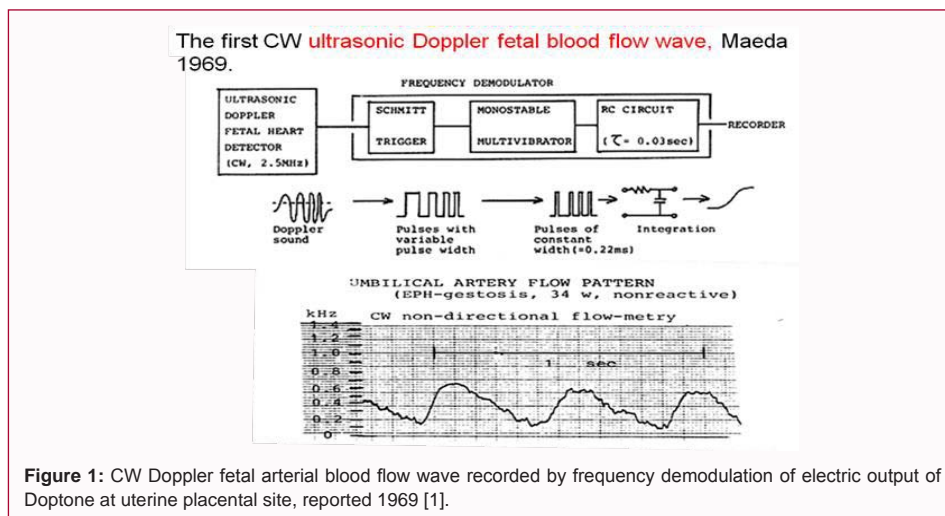


Figure 1: CW Doppler fetal arterial blood flow wave recorded by frequency demodulation of electric output of Doptone at uterine placental site, reported 1969 [1].

References

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