

A Simple Fluid Dynamic Model for Slippery Pulse Pattern in Traditional Chinese Pulse Diagnosis

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Abstract : Pulse diagnosis is one of the most important diagnosis methods in traditional Chinese medicine. It is also the trickiest method to learn. It is known as that it can only to be sensed not explained. This becomes a serious threat to the survival of this diagnostic method. However, there are a large amount of experiences accumulated during the several thousand years of practice of Chinese doctors. A pulse pattern called 'Slippery pulse' is one of the indications of pregnancy. A simple fluid dynamic model is proposed to simulate the effects of the existence of a placenta. The placenta is modeled as an extra plenum in an extremely simplified fluid network model. It is found that because of the existence of the extra plenum, indeed the pulse pattern shows a secondary peak in one pulse period. As for the author's knowledge, this work is the first time to show the link between Pulse diagnoses and basic physical principle. Key parameters which might affect the pattern are also investigated.

Keywords : Chinese medicine, flow network, pregnancy, pulse

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