

UMBILICAL ARTERY DOPPLER: HOW HIGH IS THE MAXIMUM VELOCITY AND HOW MINIMAL IS THE MINIMUM VELOCITY?

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INTRODUCTION: The umbilical Doppler is a gold standard for the assessment of fetal well-being and is currently measured by the pulsatility index (PI), other measurements of the umbilical Doppler can also be useful, in the current study we present normality tables for peak systolic velocity and minimum diastolic velocity.

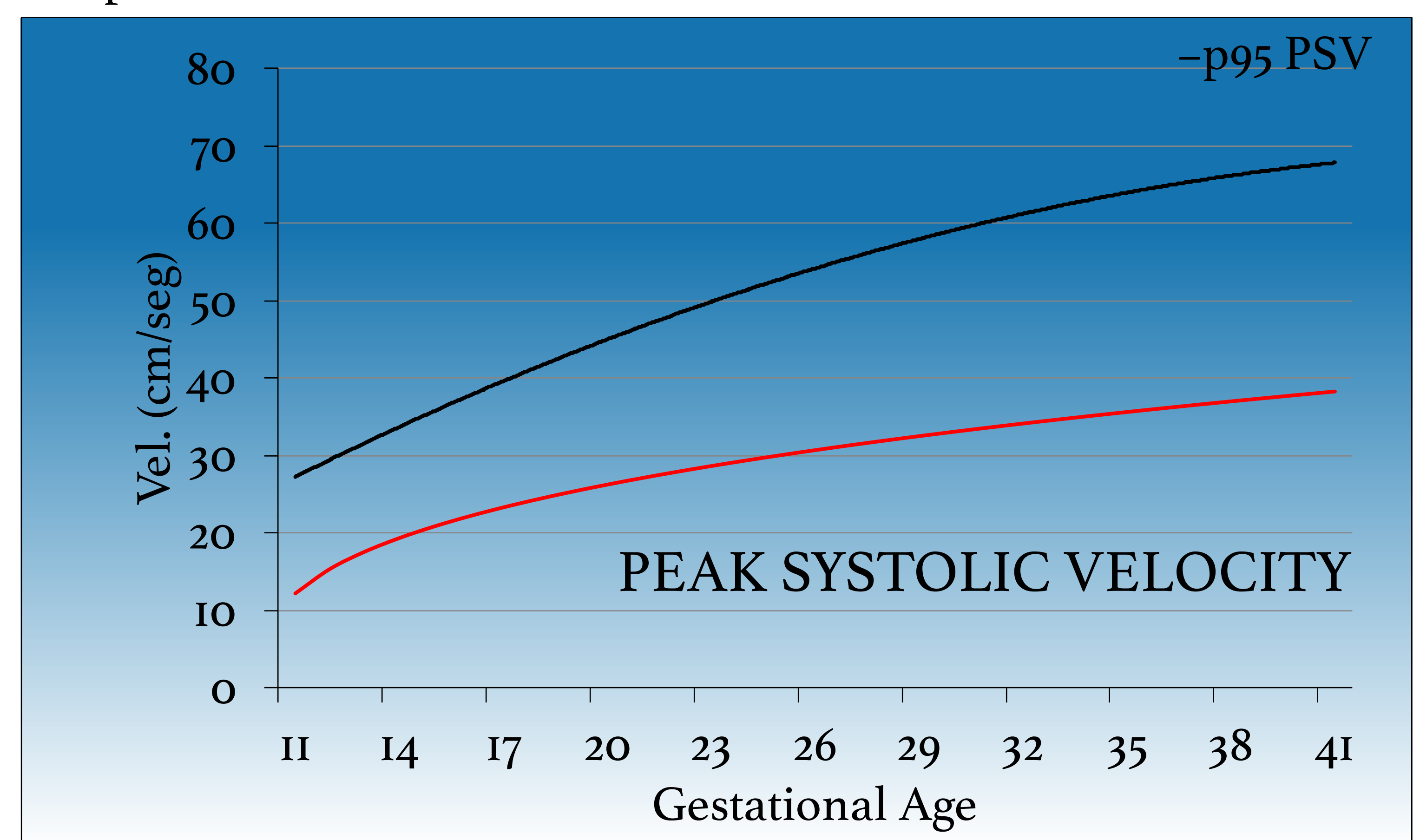
OBJECTIVES: To create reference tables for the umbilical artery (UA) 's peak systolic velocity (PSV) and minimum diastolic velocity (MDV).

METHOD: A prospective, observational, cross-sectional study was performed. Singleton pregnancies between 11 and 41 weeks, reliable gestational age, normal pregnancy and childbirth ≥ 37 weeks, attended in our ultrasound unit were included. The UA peak systolic velocity (PSV) and minimum diastolic velocity (MDV) were recorded, and the 5th and 95th percentiles were calculated.

RESULTS: 877 fetuses were studied; the curves for PSV and MDV for each gestational age were constructed. A polynomial and progressive curve was observed with gestational age for both parameters (graph 1, graph 2).

CONCLUSION: The fetal curves for PSV and MDV are presented and specific cases are described in which these measures can be useful. The curves described can be used to evaluate fetuses with fetal hyperdynamics (e.g. fetal anemia, twin twin transfusion) or hypovolemia (e.g. severe FIUGR) in addition to usual Doppler indexes.

Graph 1



Graph 2

