



UMG

Dubium sapientiae initium



FATTORI DI RISCHIO CARDIOVASCOLARE
IN ETA' PEDIATRICA: VALUTAZIONE DELLA
PULSE WAVE VELOCITY
E
INTIMAL MEDIA THICKNESS

R. Miniero, F. Altomare, A. Arone, G. Bencardino, F. De Berardinis,

TR Dolceamore, GA Mazza, F. Zurlo, F. Perticone, A. Sciacqua

Cattedra di Pediatria e Cattedra di Medicina Interna

- NELL'AMBITO DI UNA ATTIVITA' MULTIDISCIPLINARE PER LA PREVENZIONE DEL RISCHIO CARDIOVASCOLARE IN ETA' PEDIATRICA ABBIAMO ATTIVATO UNO STUDIO PER L'IDENTIFICAZIONE PRECOCE DI SITUAZIONI DI RISCHIO CARDIOVASCOLARE PER PREVENIRE LA MALATTIA ATEROSCLEROTICA IN ETÀ ADULTA.
- NELL'ADULTO LA PWV E L'IMT SONO CONSIDERATI MARKERS INDICATIVI DI RCV.
- SCOPO DELLO STUDIO È STATO QUELLO DI VALUTARE SE LA PRESENZA DI FATTORI DI RISCHIO QUALI FAMILIARITÀ PER EVENTI CARDIOVASCOLARI PRECOCI, OBESITÀ, DISLIPIDEMIE, INSULINO RESISTENZA, IPERTENSIONE ARTERIOSA E TROMBOFILIA POSSA INFLUENZARE GIÀ NEL BAMBINO LA PWV E L'IMT.

Vascular Assessment

Arterial Stiffness:

The evaluation of arterial wall stiffness has been performed by peripheral and central pulse pressure analysis and velocity by using a well validated system Sphygmocor™; (AtCor Medical, Sydney, Australia) using an applanation tonometer (Millar) and an appropriate software for pulse wave analysis. The tonometer has been put on the radial artery of the not-dominant arm in a perpendicular way and after an adequate number of measurements of pressure wave we were able to calculate augmentation pressure (AP) and index (AI). The velocity of pressure wave (pulse wave velocity, PWV) has been evaluated by evaluation of pressure wave Of opposite carotid and femoral artery.

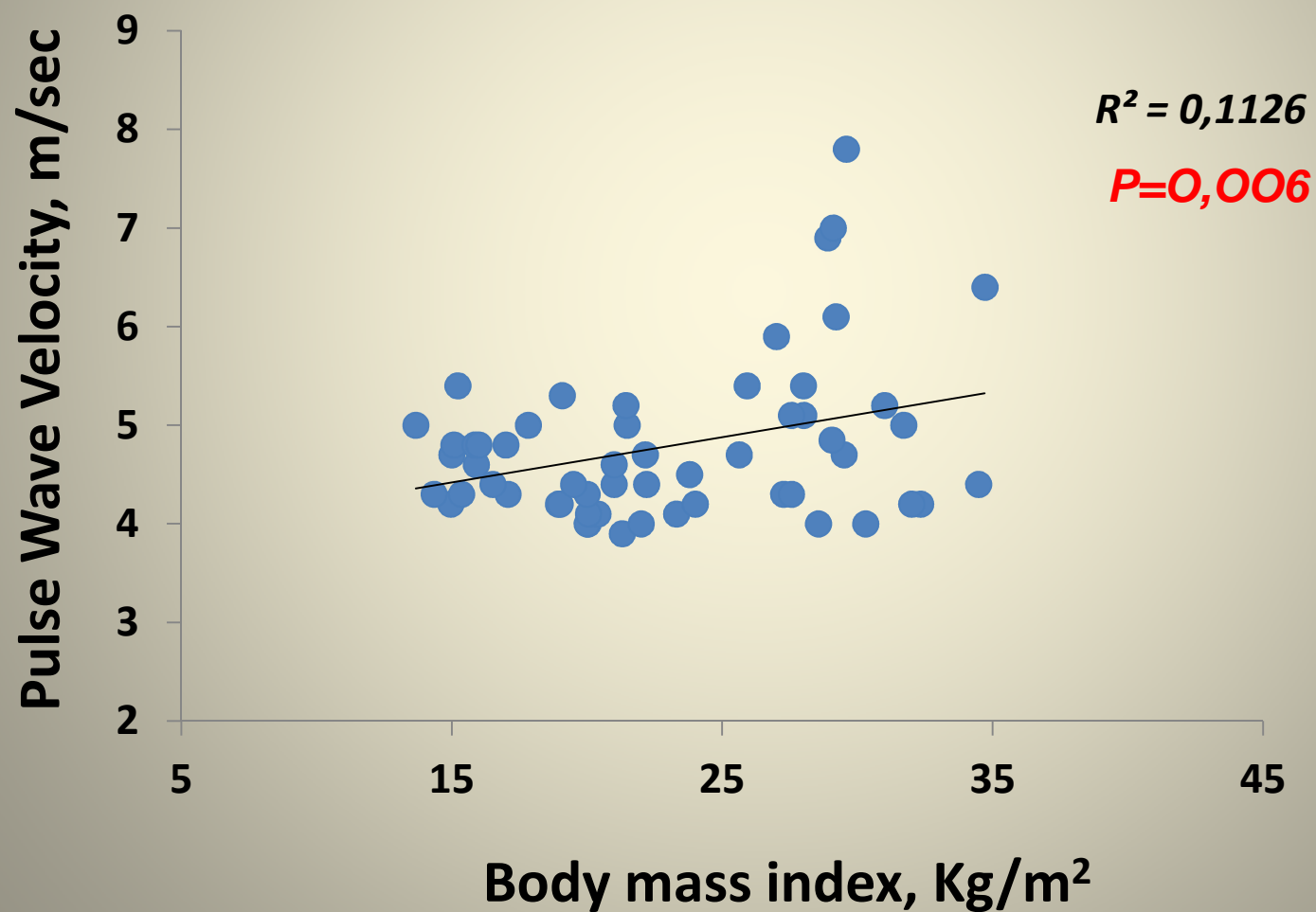
Carotid Intima-Media Thickness (IMT):

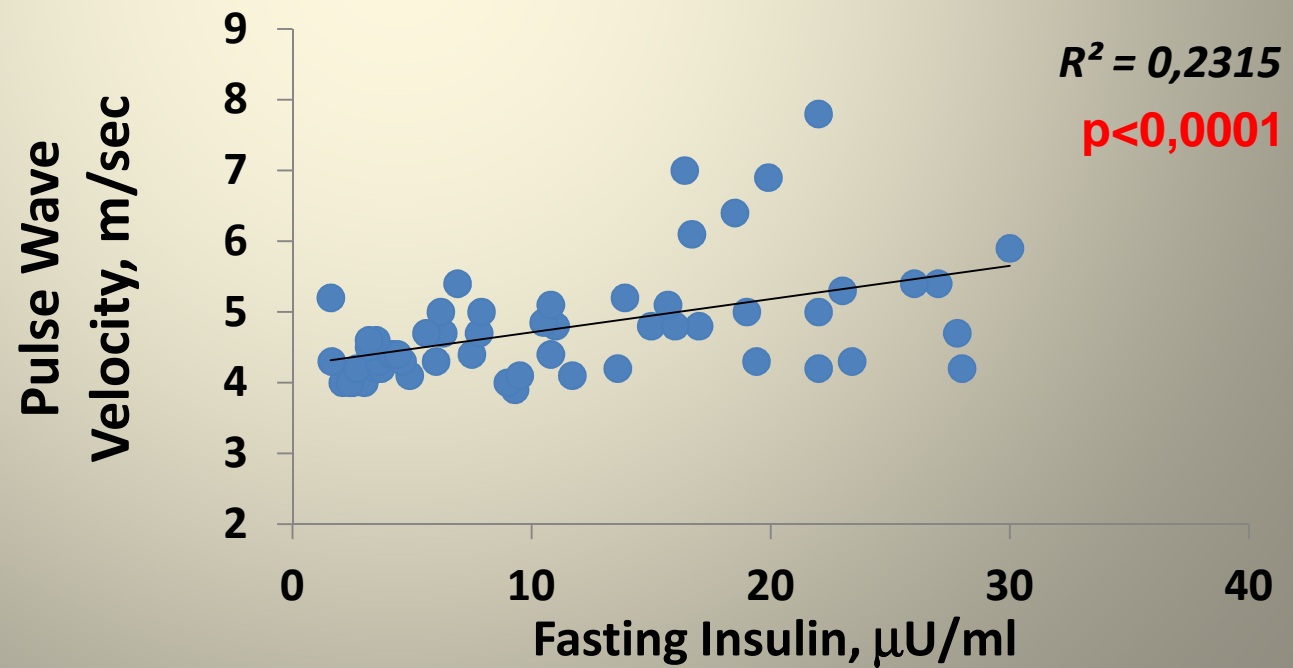
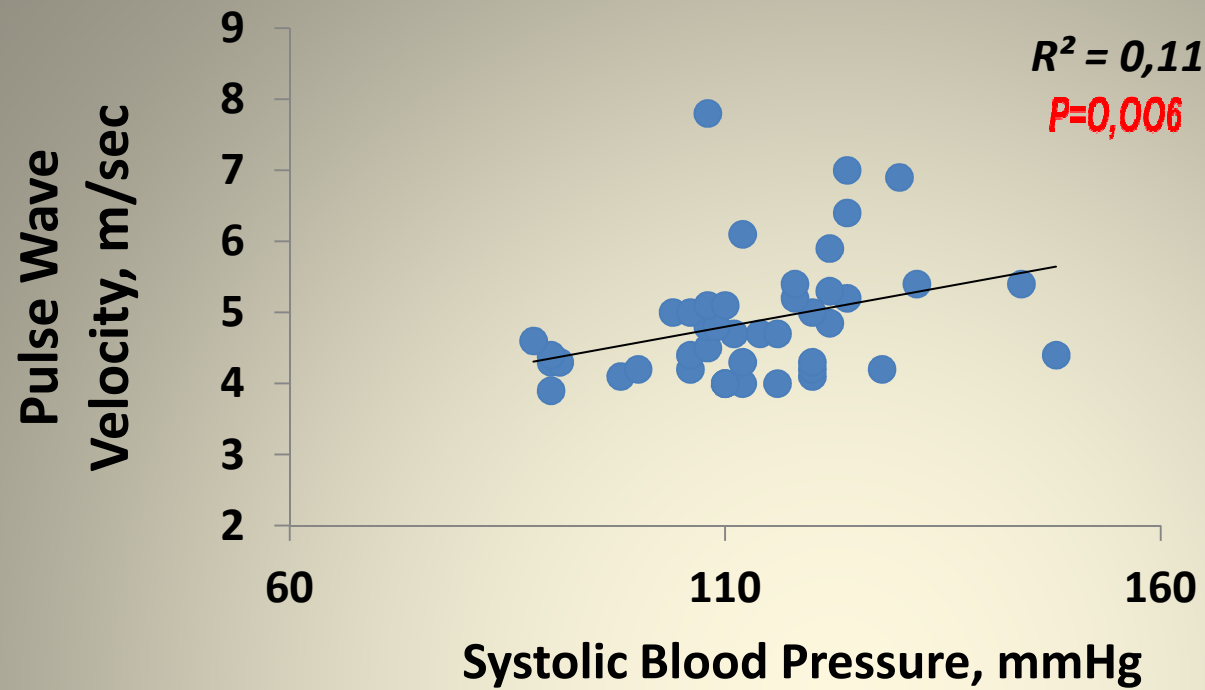
IMT has been evaluated by ultrasound methos, on both sides of the Common Carotid Arteries in a region free of plaque where the double-line pattern is observed, by standard equipment includes a high-resolution B-mode system operating with preferentially linear ultrasound transducers at frequencies 1 7 MHz, as recommended by current guidelines.

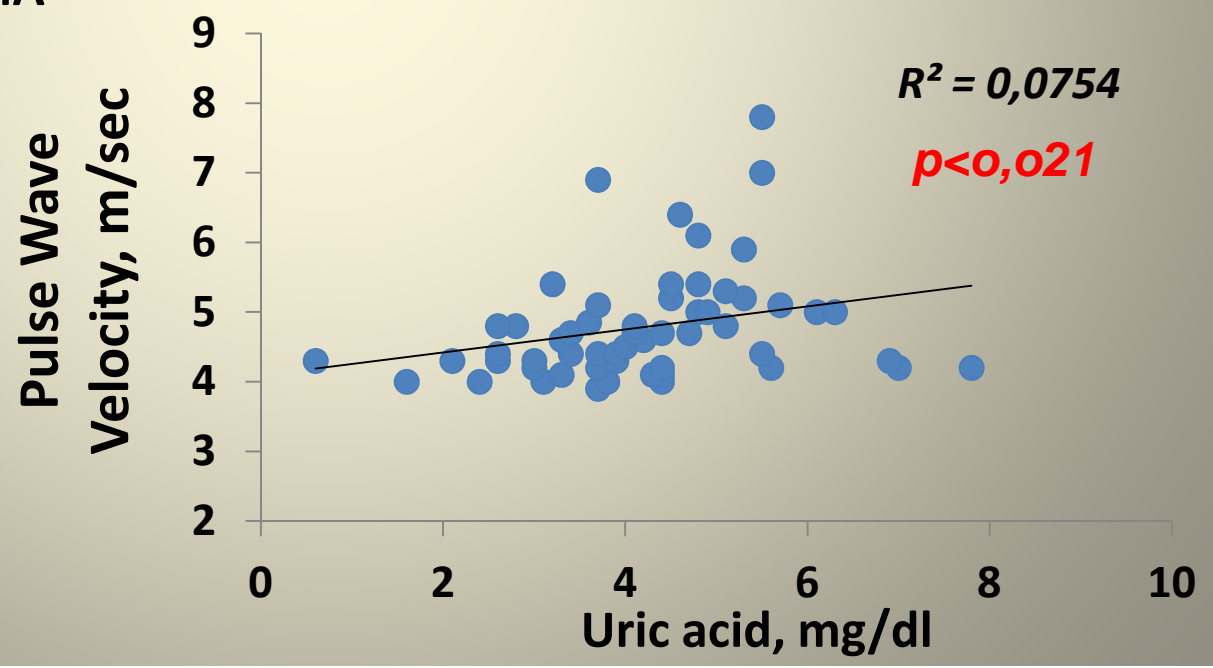
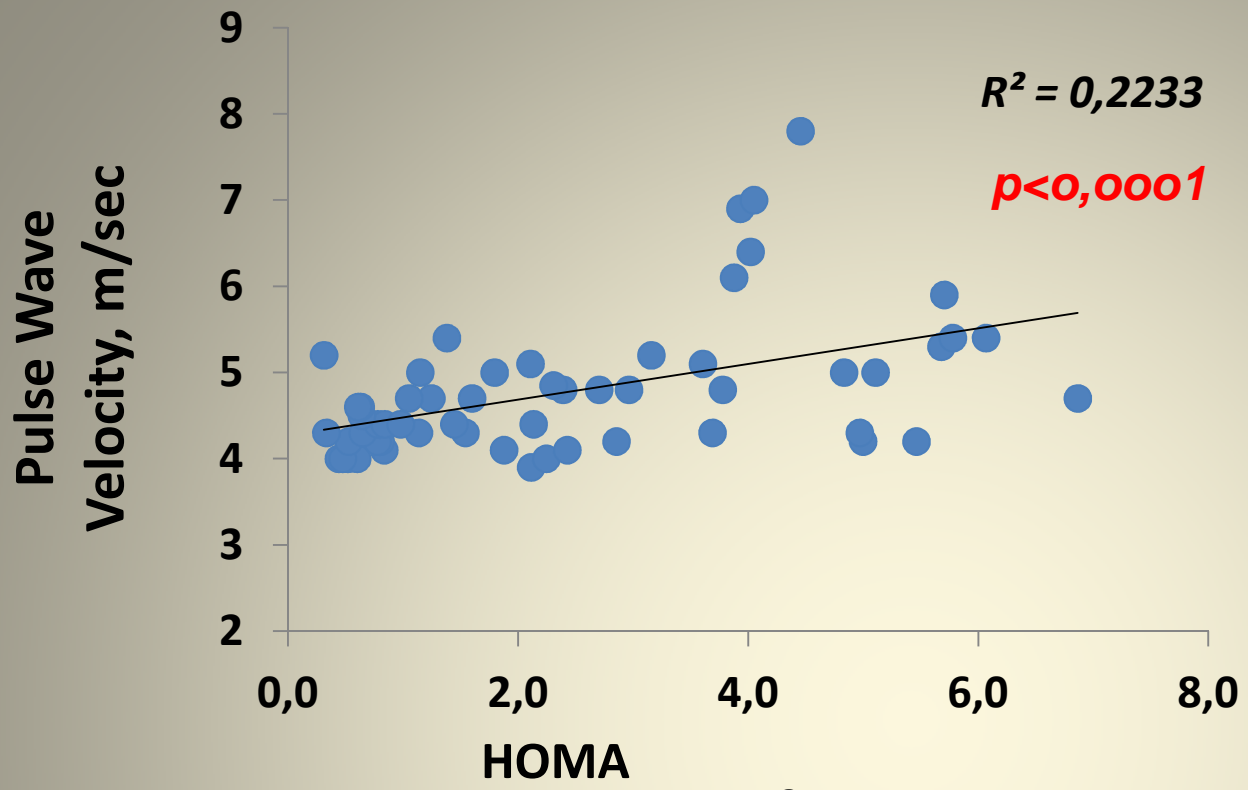
CASISTICA

- ABBIAMO ARRUOLATO 56 PAZIENTI
- 32 M E 26 F
- ETA' 11aa +/- 4aa
- Per ogni paziente sono stati valutati parametri antropometrici e biochimici
- (glicemia, insulinemia, profilo lipidico, uricemia, screening trombofilico)

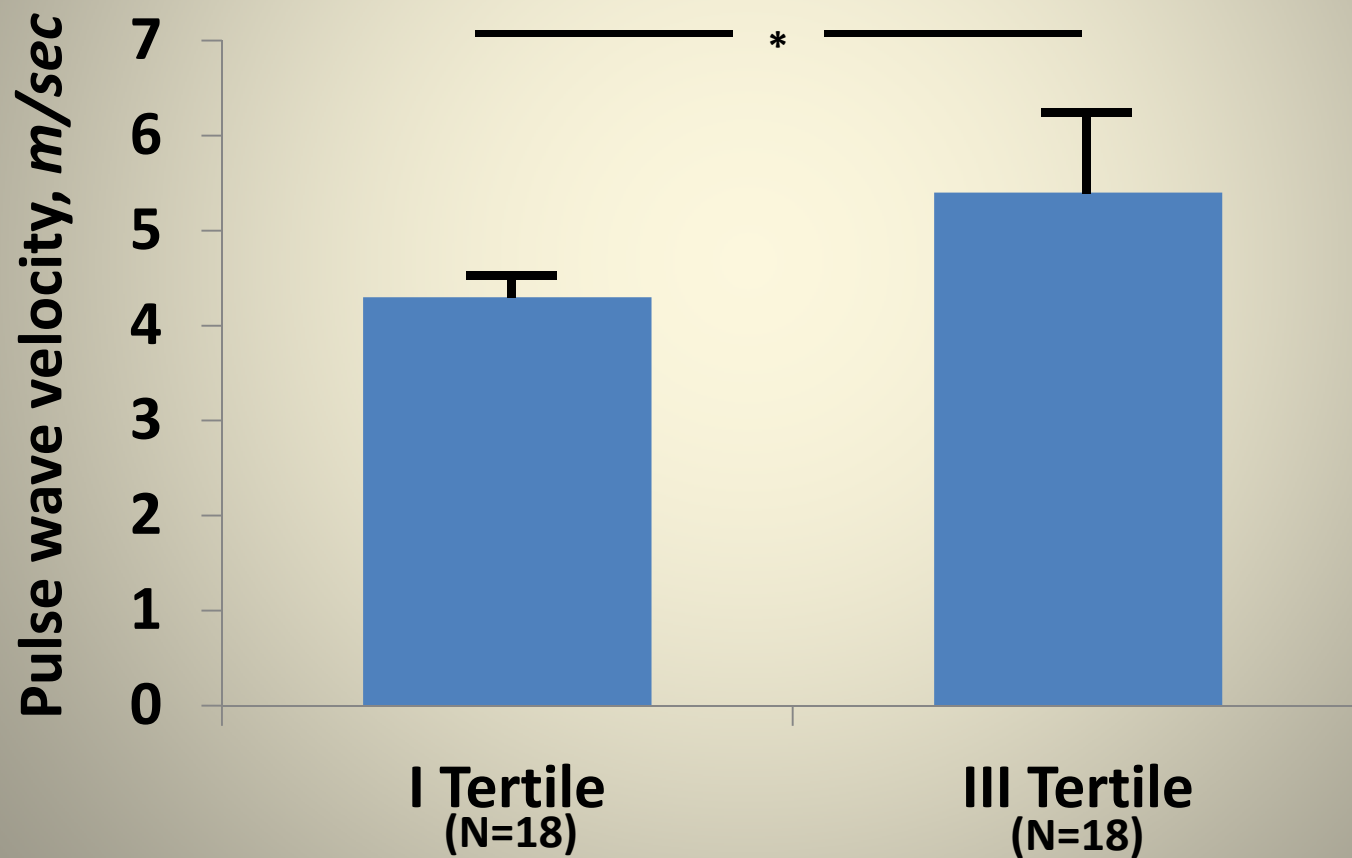
Correlation between Pulse Wave Velocity and different metabolic factors in 56 children







Mean values of Pulse Wave Velocity according to increasing tertiles of HOMA in children with cardiovascular risk factors



* 4,3_{-0,3} m/sec vs 5,4_{+1,1} m/sec; P<0.0001 by Student's *t*-test

CONCLUSIONI

I NOSTRI DATI EVIDENZIANO COME L'ECESSO PONDERALE E L'INSULINO RESISTENZA POSSANO CONDIZIONARE LA FUNZIONALITA' DELLE ARTERIE E IN PARTE LA LORO STRUTTURA GIA' IN ETA' PEDIATRICA E QUINDI ESSERE CAUSA DI UN «INVECCHIAMENTO» VASCOLARE PRECOCE