

COMPARISON OF ARTERIAL STIFFNESS INDEXES BETWEEN THE DAYS OF THE LONG INTERDIALYTIC INTERVAL IN HEMODIALYSIS PATIENTS.

G. Koutroumpas¹, P.A. Sarafidis², P.I. Georgianos³, A. Karpetas⁴, A. Protogerou⁵, P. Malindretos¹, Ch. Syrganis¹, S. Panagoutsos⁶, P. Pasadakis⁶

¹ Department of Nephrology, Achillopoulion General Hospital, Volos, Greece

² Department of Nephrology, Hippokrateion University Hospital, Thessaloniki, Greece

³ Dialysis Unit, Serres General Hospital, Serres, Greece

⁴ Section of Nephrology and Hypertension, 1st Department of Medicine, AHEPA University Hospital, Thessaloniki, Greece

⁵ Hypertension Unit & Cardiovascular Research Laboratory, "Laiko" Hospital, Medical School, National and Kapodistrian University of Athens, Greece

⁶ Division of Nephrology, Democritus University of Thrace, Alexandroupolis, Greece

Backgrounds:

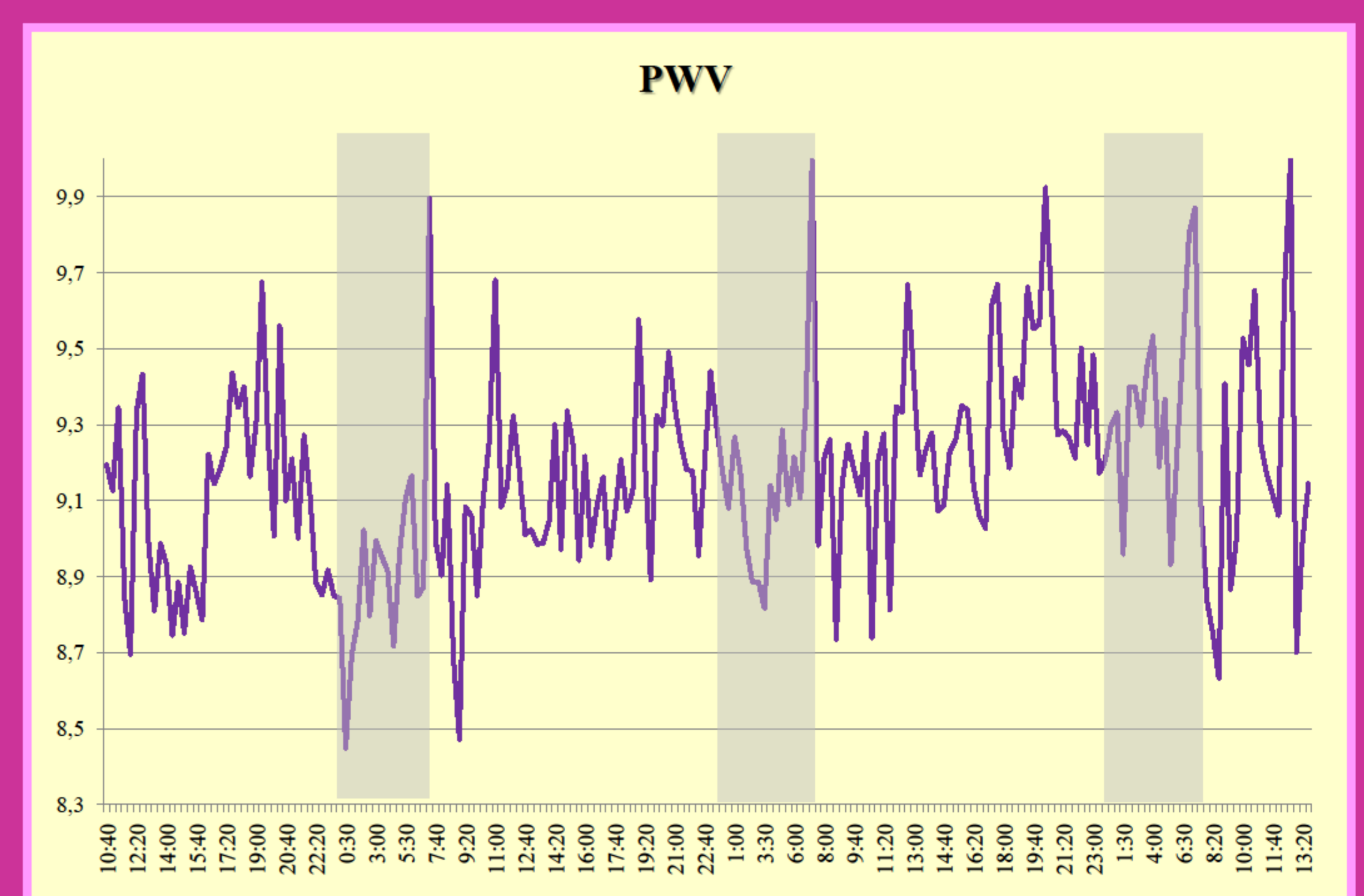
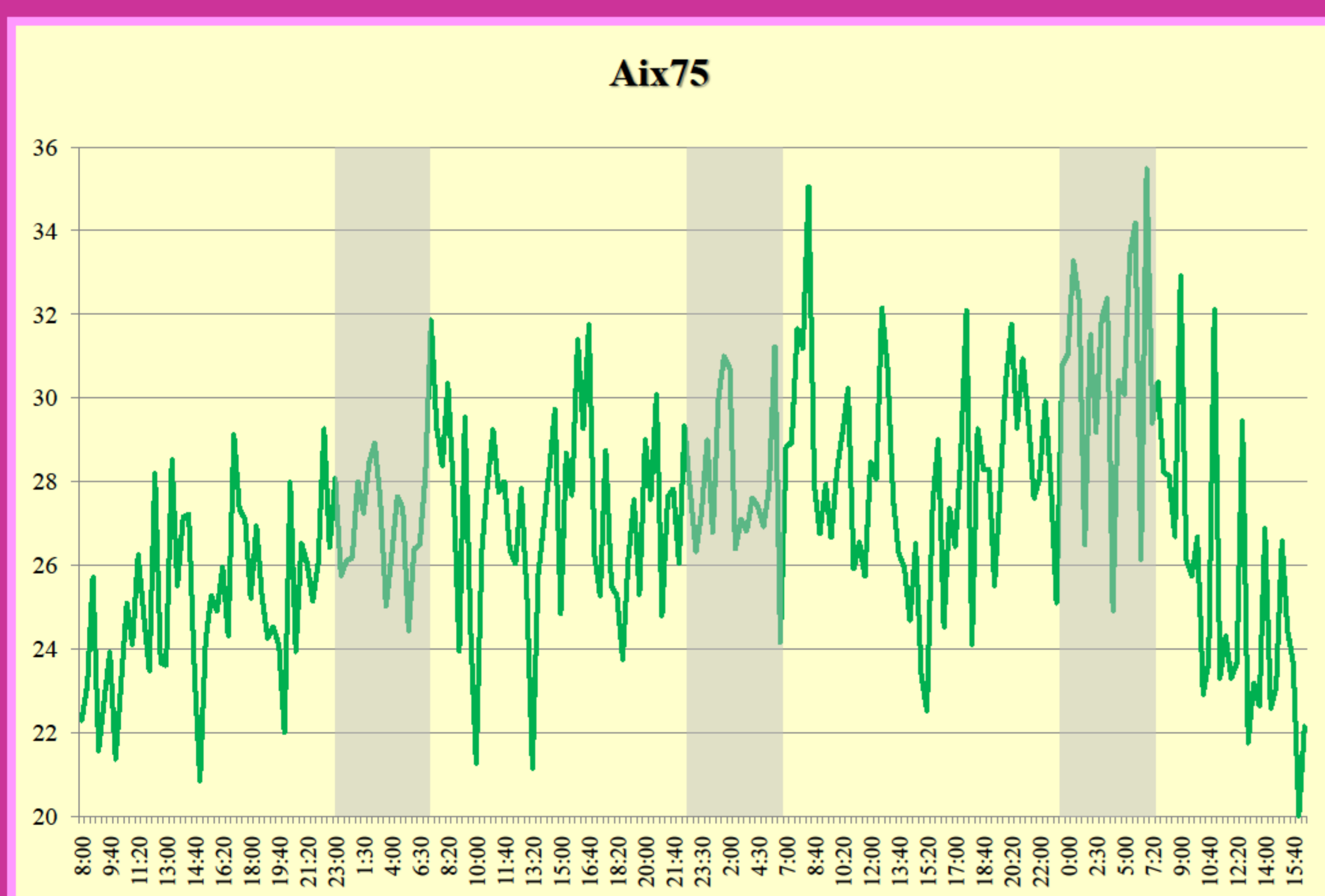
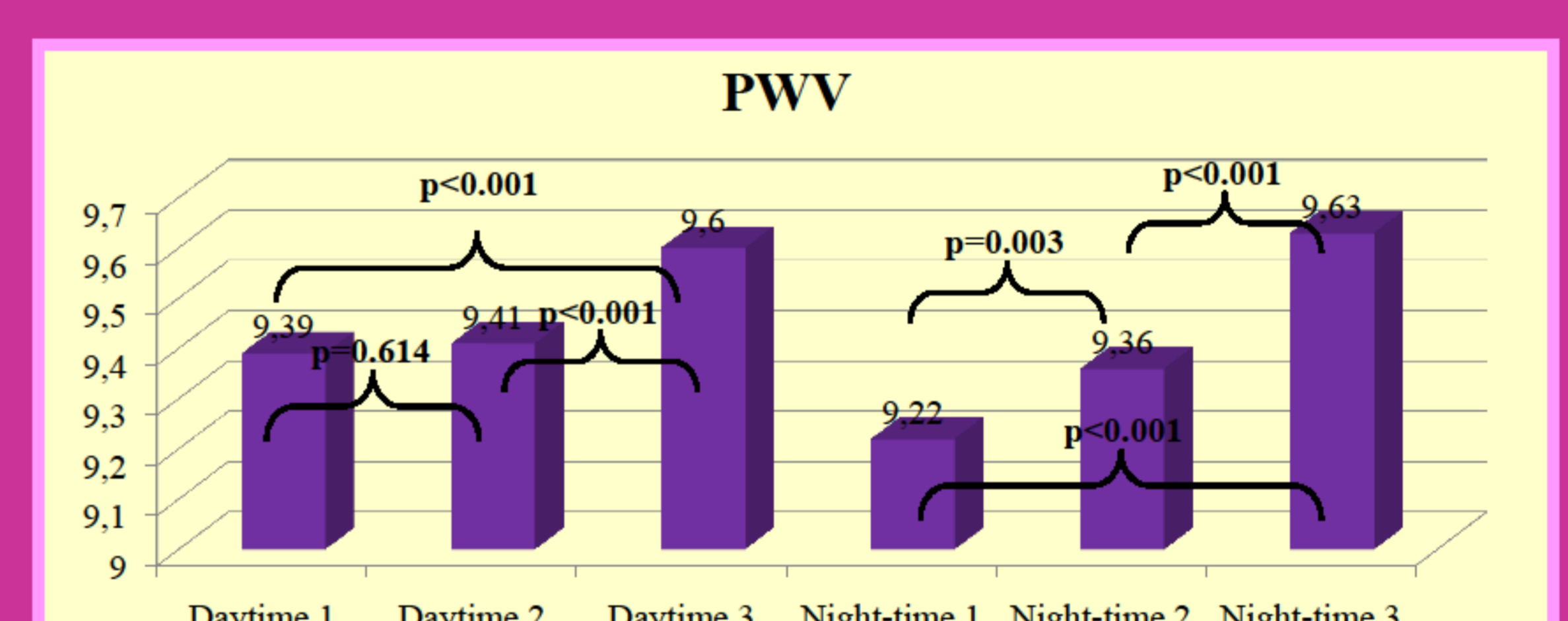
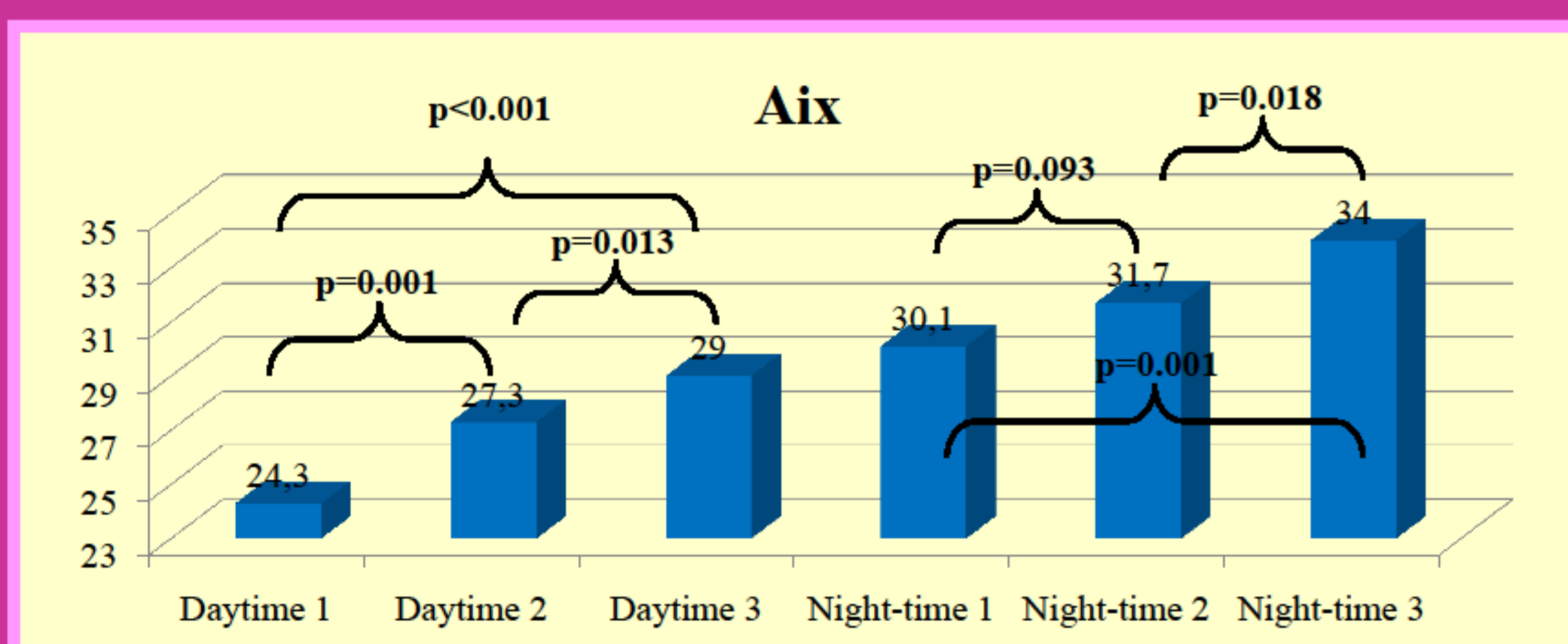
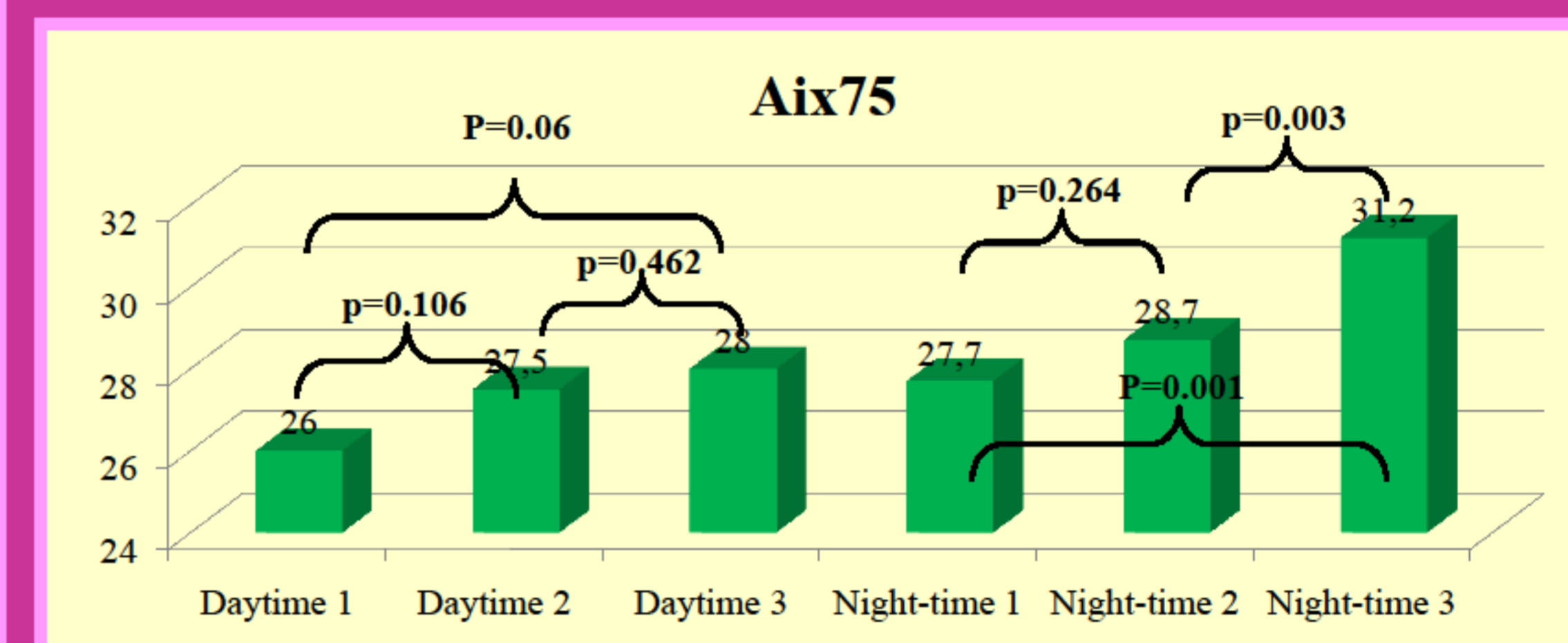
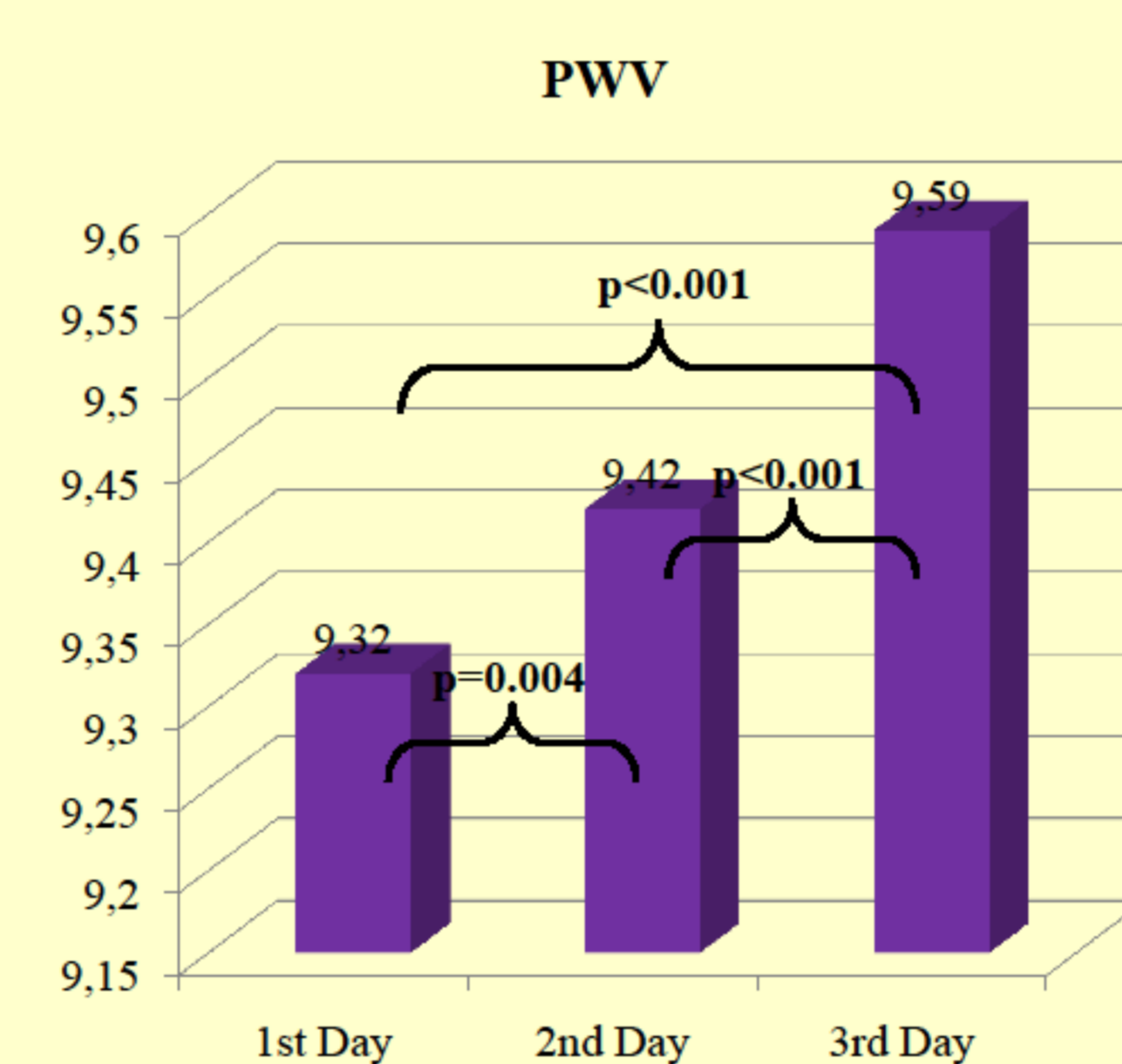
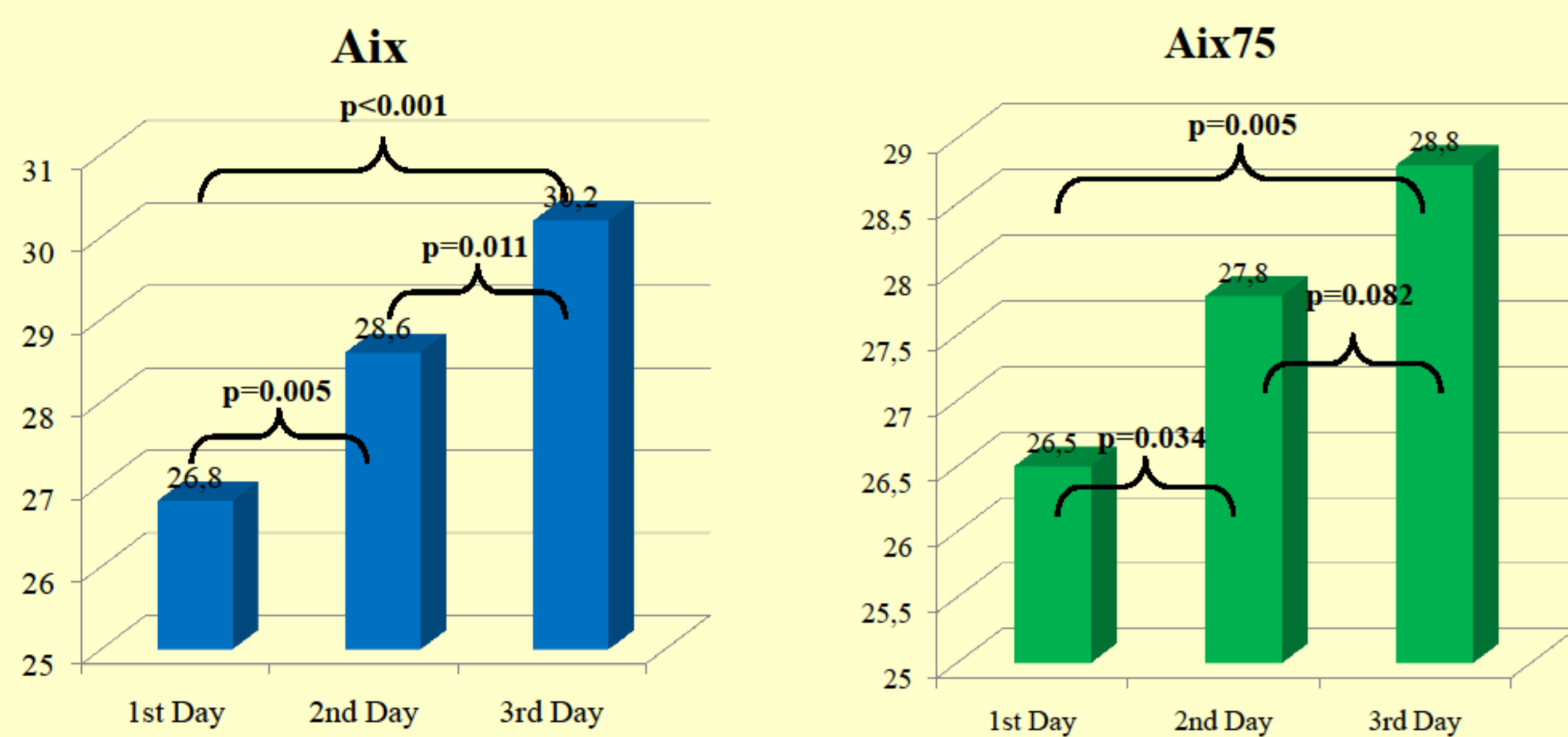
The conventional thrice-weekly hemodialysis schedule includes two regular (about 2 days) and one long (about 3 days) interdialytic interval periods. During the long interval patients have to deal with a larger amount of metabolic products and volume accumulation and recent data suggest that the end of the 3-day period associates with the highest cardiovascular risk. This study compared for the first time indexes of arterial stiffness between Day 1, Day 2 and Day 3 of a long interdialytic interval.

Materials and Methods:

Fifty eight end-stage renal disease patients receiving conventional hemodialysis (mean age 63.2 ± 14.3 years and median time on dialysis 29 months) were included in the study. All underwent a 72-hour Ambulatory Blood Pressure Monitoring covering the large interdialytic interval, with the novel Mobil-O-Graph device (IEM, Stolberg, Germany). Mobil-O-Graph is a validated brachial cuff-based automatic oscillometric device that records brachial BP and pulse waveforms and calculates Augmentation Index (Aix), Aix adjusted for 75 beats per minute (Aix75) and pulse wave velocity (PWV). Indexes of Day 1 vs Day 2 vs Day 3 were compared.



Results:



Conclusions:

This is the first study evaluating arterial stiffness indexes during a 72-hour interval in hemodialysis patients. The statistically significant increase in Aix, Aix75 and PWV during Day 3 seems to follow the BP increase but their clinical significance is needed to be determined.