ARE RENAL ARTERY AND AORTA VASCULAR INDICES RATIO A USEFUL METHOD TO ELIMINATE SEDATION DRUGS VASCULAR EFFECT ON RENAL EVALUATION OF CATS?

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Introduction
Normal values of resistive index (RI) and pulsatility index (PI) are available for healthy cats and several studies are offered cut off for renal flowmetric parameters in normal cats. RI and PI changes are reported previously in cats suffered from acute and chronic renal failures, renal tumor and polycystic kidney disease. Sedation may be necessary with aggressive cats during ultrasound examination leading to misinterpretation of vascular changes in renal failure.

The aim of this study was to eliminate intramuscular injection of midazolam-ketamine effect on renal artery and abdominal aorta resistivity and pulsatility determined by wave Doppler ultrasonography in normal adult domestic shorthair cats by using the ratio of RI mean value of renal artery / RI value of aorta (RIR/RIA) and PI mean value of renal artery / PI value of aorta (PIR/PIA).

Materials and Methods
For this purpose twenty adult healthy domestic shorthair cats were included in the present study, ten cats were sedated with midazolam-ketamine and 10 controls were not. Then RIR/RIA and PIR/PIA were calculated and statistically evaluated.

Results
There was a significant difference between the RIR/RIA in sedated cats and RIR/RIA in non-sedated cats but there was no difference in the PIR/PIA in sedated and PIR/PIA in non-sedated cats.

Conclusion
According to results of the present study, it can be considered RIR/RIA as a more sensitive index than PIR/PIA during the sedation with midazolam-ketamine, however we suggest using PIR/PIA ratio to eliminate individual effects of the drug administration during interpretation of the renal involvement based on renal vascular changes.

Key words
feline, Doppler ultrasonography, resistive index, pulseatility index, ketamine-midazolam.

Refrences

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