P4.01: EFFECTS OF TOCOLYTICAL MEDICATIONS ON THE PERIPHERAL AND CENTRAL HEMODYNAMICS OF HEALTHY FEMALE VOLUNTEERS

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Poster Presentation Abstracts
Therapeutic Aspects 1

P4.01 EFFECTS OF TOCOLYTICAL MEDICATIONS ON THE PERIPHERAL AND CENTRAL HEMODYNAMICS OF HEALTHY FEMALE VOLUNTEERS
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Objective: Atosiban and ritodrine are frequently used tocolytics. Only a few studies investigated the hemodynamic effects of atosiban. We therefore aimed to study the effects on the blood pressure (BP) and BP-amplification.

Methods: Twenty healthy female volunteers (19-41 yrs) were given atosiban (300 µg/min over 2 h) and placebo intravenously (IV) in a random crossover design. Eight of them also received ritodrine IV in escalating doses up to 400µg/min over 2 h. The hemodynamics were investigated at steady state using blood pressure (BP) at the brachial artery (BA) and pulse wave analysis on the common carotid artery and echocardiography for cardiac output (CO). Statistical analysis was done using Friedman and Wilcoxon tests (value of significance at 0.05).

Results: Effects on atosiban/placebo on N = 20 did not differ from N = 8.

| Parameters            | Ritodrine   | Atosiban | Placebo | p-value
|-----------------------|-------------|----------|---------|---------|
| CI (l/min/m²)         | 3.15 ± 0.92  | 1.91 ± 0.47  | 1.75 ± 0.36  | 0.002
| SI (ml/m²)            | 28.19 ± 6.34  | 32.47 ± 7.07  | 30.40 ± 4.27  | 0.325
| HR (bpm)              | 111 ± 20      | 59 ± 10       | 57 ± 9         | 0.002
| TPRI (mmHg.ml⁻¹.s⁻¹)  | 1.53 ± 0.48    | 2.69 ± 0.85    | 2.93 ± 0.66    | 0.005
| MAP (mmHg)            | 76 ± 10       | 84 ± 8        | 82 ± 6         | <0.001
| AGPP (mmHg)           | -8.67 ± 12.30  | 2.29 ± 17.35  | 4.38 ± 13.67  | 0.368

BP (systolic BP), DBP (diastolic BP), MAP (mean arterial pressure). Friedman-test, * significant vs. atosiban, # significant vs. placebo.

Conclusion: The data show increased SBP at the CCA and BA and lower DBP and MAP under ritodrine. The effects of atosiban did not differ from placebo. Although not statistically significant, the data suggest a nearly absent pressure amplification between CCA-RA during ritodrine administration.

P4.02 EFFECTS OF TOCOLYTICAL MEDICATION ON BLOOD PRESSURE AND BLOOD PRESSURE AMPLIFICATION
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P4.03 SUB-ACUTE EFFECTS OF BLOOD PRESSURE LOWERING WITH AMLODIPINE OR LISINOPRIL ON LOCAL CAROTID ARTERY HAEMODYNAMICS
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Introduction: Anti-hypertensive agents differ in their ability to slow progression of the increase in carotid artery intima-media thickness (IMT) with