1ª edição - Jornadas do Programa Doutoral em Metabolismo – Clínica e Experimentação

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BOCK OF ABSTRACTS

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Índice

Conclusions: Diabetes can negatively influence outcomes in SfTf patients and may impact the decision of which specific procedure technique should be employed. Further studies are necessary to define how diabetes influences response to ultrasound-guided realease of the A1 pulley in SfTf, as well as the extent to which control of blood sugar levels can contribute towards the personalization and optimization of patient follow up.

Key words: collagen; diabetes; interventional radiology; trigger finger; ultrasound

4.6. P06 – Manuela Meireles

Postprandial glycemia after a high-rich carbohydrate meal: a randomized cross-over clinical trial on olive leaf tea effect

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Background: Infusions of olive leaves have been used in traditional herbal medicine as a way to treat and prevent many diseases, including diabetes. Olive leaves are naturally rich in oleuropein, and previous studies have shown the potential of oleuropein in mitigating diabetes and diabetes complications in vitro and in vivo. This study aimed to investigate the effect of natural olive leaves tea on postprandial glycemia in healthy volunteers, when ingested with a high-carbohydrate meal comparing with a placebo tea. The hypothesis present was that olive leaf tea would improve glycemic control and modulate postprandial glycaemia.

Methodology: Thirteen healthy adults participated in a double-blinded, randomized, placebo-controlled, and cross-over design trial. Participants ingested a test meal composed of 2 slices of wheat bread (110g) and 50g of apricot peach with olive leaf tea (OLT) or two slices of wheat bread (110g) and 50 g of apricot peach with 250 ml of placebo tea (CON) in two different moments, and after a wash-out period. Capillary blood glucose was measured at times 0, 15, 30, 60, 90 and 120 min after ingestion of each test meal.

Results: At baseline, there were no significant differences between capillary plasma glucoses measured before the CON or OLT interventions. Consumption of OLT resulted in a delay in peak time (48,5 $\pm$ 4,2 min vs 35,7 $\pm$ 4,0 min, p=0,03) and a significant increase in glucose area under the curve compared to placebo (14502,7 $\pm$ 640,8 vs 13633,3 $\pm$ 869,4, p= 0.03). No significant differences ($p<0.05$) between conditions at individual time points were denoted.

Conclusions: Olive leaf tea did not ameliorate a glycemic curve induced by carbohydrate rich meal ingestion, however OLT delay on glycemic peak should be further explored. Also, future studies should account for chronic consumption in order to provide a better understanding on glycemic regulation over time.

Key words: Olive leaf tea; postprandial glycemia; diabetes.

Trial registration: ClinicalTrials.gov NCT05397509

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4.7. P07 – Alexandra Aveiro

The influence of adipocytes' secretome and immune response on bacterial growth

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Background: Obesity and antimicrobial resistance are considered a threat to global public health. The state of obesity entails an imbalance in the production of proinflammatory and anti-inflammatory factors that contributes to infections' susceptibility. *Klebsiella pneumonae* is part of the ESKAPE being one of the most virulent and antibiotic resistant bacterial pathogens, with high prevalence in hospital and community-acquired bacterial infections. Bacteria's alarming ability to gain resistance has raised concerning obstacles in antimicrobial therapies in patients with chronic inflammation, such as obese individuals.

This study aimed to understand the influence of an inflammatory obesity-mimicking environment in the growth of *Klebsiella pneumonae* strains with different antibiotic resistance.

Methodology: The secretome of the cell lines Raw 264.7 (macrophages) and 3T3-L1 (adipocytes) were collected to serve as conditioned media for bacterial growth. Antibiotic-resistant *Klebsiella pneumonae* strains (ATCC, carbapenem-resistance (CR), extended-spectrum beta-lactamase (ESBL) and CR/ESBL) were exposed to a variety of conditioned media (DMEM, DMEM with 10% and 50% adipocyte secretome (SA), macrophage secretome (SM), and macrophage secretome previously conditioned with 10% and 50% SA). Bacteria growth curves assessment was performed by absorbance measurement in a kinetic mode for a period of 5 days.

Results: Results showed that for ATCC strain the different mediums didn't provide distinct growth conditions between them. However, when different resistance signatures were considered, the growth profile showed distinct differences. The CR strain showed higher population in the mediums with SM, regardless the percentage of SA, while the ESBL strain presented higher population in the mediums with SA without SM. Interestingly, for 50% SA, having SM in the medium or not showed no difference. For the strain with both resistances (CR/ESBL), results were similar to the CR strain.

Conclusions: Overall, results showed that the resistance to carbapenems is a greater risk factor than resistance to extended spectrum cephalosporins in a SM environment.

Key words: Obesity; Antimicrobial Resistance; Secretome; Macrophages

4.8. P08 – Sofia João dos Santos Nogueira