P950 Tissue cortisol vs lipolysis in ICU patients

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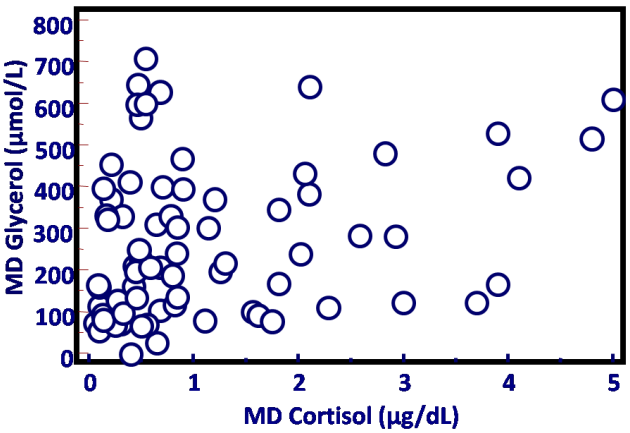
1. Introduction

The interplay of cortisol (F) and adipose tissue is complex and in many aspects is still obscure [1]. Plasma F has been shown to be positively associated with lipolysis [2].

2. Aim

To study in adipose tissue indices of lipolysis vs tissue F with microdialysis (MD).



3. Subjects and methods

We studied 46 mechanically ventilated patients with a diagnosis of septic or non-septic shock (Sho), systemic inflammatory response syndrome (SIRS) or severe sepsis (SSe) [3]. Upon ICU admission a MD catheter was inserted under sterile conditions into the subcutaneous adipose tissue of the upper thigh. Excluding patients on steroid therapy, on day 2 (n=26), day 3 (n=24) and day 4 (n=22) MD samples were collected six times per day for MD glycerol (MD GLYC; used as an index of lipolysis) and tissue F. The mean of these 6 collections was used for analysis (normal values for adipose tissue GLYC glycerol < 200 µmol/L [4, 5]). Statistics were done with Spearman's rank correlation.

4. Results

Most samplings (44/72) indicated accentuated lipolysis with above-normal MD GLYC levels. MD GLYC was weakly correlated to MD F (rho=0.246, p=0.038).

5. Discussion

We verified the well-known association (though modestly so) between lipolysis and F (and in particular with interstitial/tissue levels of it) [2]. Changes in interstitial/ tissue F may not be reflected in plasma (total) concentrations [6, 7]. Thus it is interesting that we observed an - albeit weak - association between tissue lipolysis (via MD GLYC levels) and MD F.

6. References

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