VAL 58 - CHANGES IN BIOIMPEDANCE PARAMETERS AND BASAL METABOLIC RATE AFTER HEART SURGERY. COMPARISON OF A SIMPLE AND A COMPLICATED CASE

Bodystat® Changing Attitudes to Health

OBJECTIVE: Show changes in body composition due to cardiac surgery. Show changes in Basal Metabolic Rate (BMR) due to cardiac surgery

DESIGN: Multifrequency bioimpedance analysis may provide insight into the compartmental changes. Cells are non-conductive at low frequency (5 kHz) current passes in the extracellular space. Integrity of the cells can be characterized by the **measured** impedance values at 200 kHz and 5 kHz **Illness Marker** (IM). Tracking IM over time cellular health can be predicted; may be a prognostic tool.

SUBJECTS / METHODS:

Baseline patient characteristics

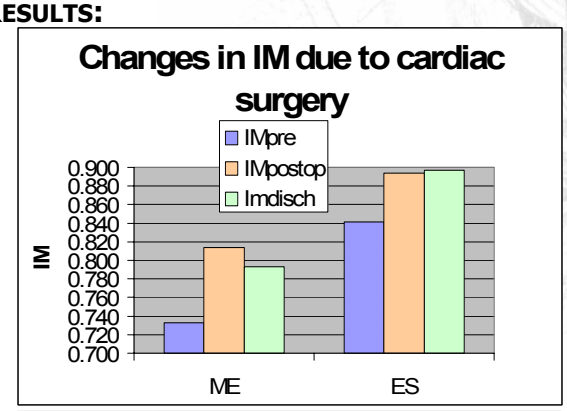
	ME	ES
GENDER	FEMALE	FEMALE
AGE (YEARS)	68	68
DIABETES	YES	YES
BMI (KG/M2)	32	32
TBW (%)	48.2	43
FAT (%)	41.4	50.1
ECW (%)	22.2	20.1
IM	0.733	0.841
BMR (KCAL)	18.5	16.7

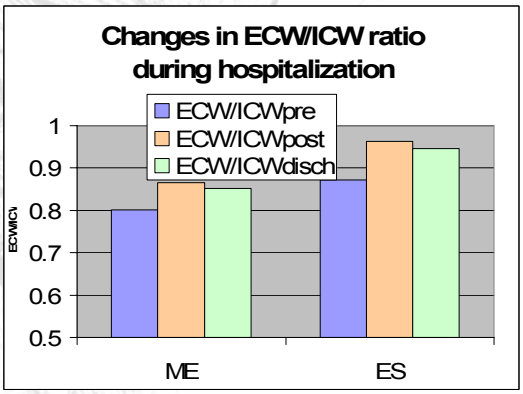
Characteristics regarding to the surgery

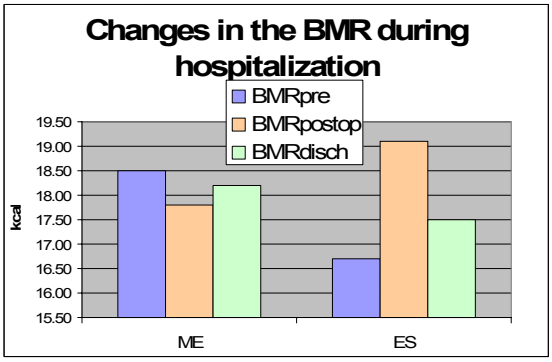
	ME	ES
Type of surgery	coronary	combined
Aortic cross-clamp time	35 mins	130 mins
Total perfusion time	62 mins	157 mins
Stay in ICU (days)	1	1
Length of postoperative hospital stay (days)	6	8

Two age and gender matched patients undergone cardiac surgery were chosen. Body weight measured by digital scale to the nearest 0.1 kg. Body height measured by stadiometer to the nearest 0.1 cm. Bioimpedance measurements performed by a multifrequency device (Quadscan 4000 – Bodystat Ltd., Isle of Man). Measurements done 3 times: at admission, in the first 24 hours following surgery, before discharge.

RESULTS:







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CONCLUSION: Bioimpedance analysis is a simple, **bed-side tool** for **tracking changes**:
in body composition
of Illness Marker
of Basal Metabolic Rate
during hospitalization.
Illness Marker can be used to **raise the awareness** of potential complicated clinical course.
Individualized nutrition based upon the BMR is possible.

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