*i*CAHE JC Critical Appraisal Summary

Journal Club Details

Journal Club location	Repatriation General Hospital
JC Facilitator	Caroline Bartle
JC Discipline	Dietetics

Background

Literature that shows energy and protein requirements for adults with cachexia

Article/Paper

Van Dijk et al. (2015). Effects of oral meal feeding on whole body protein breakdown and protein synthesis in cachectic pancreatic cancer patients. Journal of Cachexia, Sarcopenia and Muscle; 6: 212–221

Please note: due to copyright regulations CAHE is unable to supply a copy of the critically appraised paper/article. If you are an employee of the South Australian government you can obtain a copy of articles from the DOHSA librarian.

Article Methodology: Case Control

Click here to access critical appraisal tool

International Centre for Allied Health Evidence (iCAHE)

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Ques No.	Yes	Can't Tell	No	Comments
1	✓			**Did the study address a clearly focused issue?** This study aimed to investigate the effect of protein meal feeding on whole body protein turnover, protein synthesis, and protein breakdown in cachectic pancreatic cancer patients compared with non-oncologic surgical control patients by using established methods of primed continuous infusions of stable isotope-labelled amino acids.
2	✓			**Did the authors use an appropriate method to answer their question?** A matched case-control study design was used. Given the aims of this study this was an appropriate design. **Is it worth continuing?** Yes
3		✓		**Were the cases recruited in an acceptable way?** No information on case subject recruitment was reported.
4		✓		**Were the controls selected in an acceptable way?** Limited information was provided on the recruitment of controls.
5	✓			**Was the exposure accurately measured to minimise bias?** The study protocol for the exposure was very accurately administered to both the subjects and controls.
6		✓		**What confounding factors have the authors accounted for?** No confounders were reported. **Have the authors taken account of the potential confounding factors in the design and/or in their analysis?** Discuss this in your Journal Club

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7				**What are the results of this study?** Baseline protein breakdown and protein synthesis were higher in cachectic patients compared with the controls (breakdown: 67.1 (48.1–79.6) vs. 45.8 (42.6–46.3) μmol/kg lean body mass/h, P = 0.049; and synthesis: 63.0 (44.3–75.6) vs. 41.8 (37.6–42.5) μmol/kg lean body mass/h, P = 0.021). During feeding, protein breakdown decreased significantly to 45.5 (26.9–51.1) μmol/kg lean body mass/h (P = 0.012) in the cachexia group and to 33.7 (17.4–37.1) μmol/kg lean body mass/h (P = 0.018) in the control group. Protein synthesis was not affected by feeding in cachectic patients: 58.4 (46.5–76.1) μmol/kg lean body mass/h, but was stimulated in controls: 47.9 (41.8–56.7) μmol/kg lean body mass/h (P = 0.018). Both groups showed a comparable positive net protein balance during feeding: cachexia: 19.7 (13.1–23.7) and control: 16.3 (13.6–25.4) μmol/kg lean body mass/h (P = 0.908).
8				**How precise are the results?** Not reported
9	Discuss this in your Journal Club			**Do you believe the results?**
10				**What do the study findings mean to practice (i.e. clinical practice, systems or processes)?**
11				**What are your next steps? (e.g. evaluate clinical practice against evidence-based recommendations; organise the next four journal club meetings around this topic to build the evidence base; organize training for staff, etc.)**
12				**What is required to implement these next steps?**