The effectiveness of pre- and postoperative dietary interventions to prevent weight loss after orthognathic surgery

a randomized controlled trail

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Background
Patients who undergo orthognathic surgery (jaw surgery) are mostly young people. Results from international studies indicate that patients lose weight from three to ten kilograms after surgery. The largest weight loss appears within the first three weeks after surgery. Postoperative weight loss is inappropriate as it increases the risk of impaired wound and bone healing, higher infection rate and impact functional level and wellbeing

Objective
To study whether systematic dietary interventions pre- and postoperatively can prevent weight loss in the first eight weeks after orthognathic surgery, thereby optimizing the patient's well-being

Facts
Patients undergoing orthognathic surgery have an increased basal metabolic rate. Added with fasting period increases risk for stress metabolism and weight loss. The estimated increased calorie intake is approximately 3-500 kcal/day depending on weight, height, age and surgery

Key aspects of pre- and postoperative care:

- Avoid long preoperative fasting
- Diet as early as possible postoperatively
- Early mobilization to facilitate protein synthesis and muscle function

Method
A three arms randomized controlled trial with two intervention groups and one control group consecutively including 50 patients in each arm

Questionnaires: Patients assess: Pain; Nausea; Swelling; Activity level; State of mind; Coping with daily activity, Energy to be social; Well-being from Visual Analogue Scale

Inclusion criteria: Patients who undergo single or double jaw surgery, ≥18 years old, mental competent and able to provide an informed written consent

Exclusion criteria: Diabetes Mellitus

Tentative results
Indicates that the postoperative weight loss is reduced in patients randomized to the two intervention groups compared with patients in the control group. The study is under process and includes currently 120 out of 150 patients

Arm one

Measurement on Tanita Body Composition Analyzer fourteen days and the day before surgery

Preoperatively agreed night meal and 125 ml Nutridrink Compact Protein the night before surgery. Six hours fasting before surgery

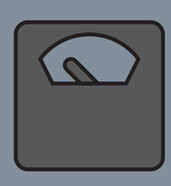
400 ml Maltodextrin two hours before surgery

Tube feeding during hospitalization: 1200 ml Nutrison Protein Plus MultiFibre

Soft diet for six-eight weeks supplemented with Nutridrink Compact Protein in the first ten days postoperatively

Answer an electronic questionnaire daily for the first ten days, followed by ones a week through eight weeks postoperatively

Measurement on Tanita Body Composition Analyzer one-, three- and eight weeks postoperatively



Arm Two

Measurement on Tanita Body Composition Analyzer fourteen days and the day before surgery

Preoperatively agreed night meal and 125 ml Nutridrink Compact Protein the night before surgery. Six hours fasting before surgery

400 ml Maltodextrin two hours before surgery

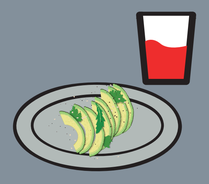
Nutridrink Compact Protein equaling the amount of tube feeding in arm one during hospitalization

Soft diet for six-eight weeks supplemented with Nutridrink Compact Protein in the first ten days postoperatively

Answer an electronic questionnaire daily for the first ten days, followed by ones a week through eight weeks postoperatively

Measurement on Tanita Body Composition Analyzer one-, three- and eight weeks postoperatively

Control Arm



Measurement on Tanita Body Composition Analyzer fourteen days and the day before surgery

Six hours fasting before surgery

Two glasses of soft drinks two hours before surgery

Cold liquid diet on the operation day after surgery. Then soft diet during the rest of the hospitalization

Soft diet for six-eight weeks on the basis of the usual dietary information

Answer an electronic questionnaire daily for the first ten days, followed by ones a week through eight weeks postoperatively

Measurement on Tanita Body Composition Analyzer one-, three- and eight weeks postoperatively

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