Clinical Oncology Society of Australia

CLINICAL CASE STUDY

Surgical Prehabilitation

SITUATION	39M refugee "Ahmed Ali" with upper gastrointestinal cancer presenting to hospital with oesophageal dysphagia and suspected malnutrition, for feeding tube insertion and treatment planning. Requiring neo-adjuvant treatment at tertiary referral hospital for a period of 5 weeks and prehabilitation under the care of community dietitian and exercise physiologist prior to surgery. Recently moved to rural NSW with no English language skills (all interactions required interpreter). Ahmed has a history of trauma from his experience in a refugee camp and distress associated with separation from close family members. Clinicians are unsure about his understanding of his procedure and engagement in prehabilitation. 45kg on admission with history of 20kg weight loss (33%) in 3-6 months. MST= 4 (at risk of malnutrition). SARC-CalF = 16 (at risk of sarcopenia). Referral placed to dietitian, speech pathologist and physiotherapist.
WHAT care was provided? **(Action)**	▪ Nutrition assessment - Weight 45.2kg - Muscle mass assessed. ALM/height (m)2= 6 kg/m2 - PG-SGA score 16; Stage C (severely malnourished) - Identified at risk of refeeding syndrome - PG-SGA repeated at end of treatment and 3 months post treatment. ▪ Physical assessment - Muscle strength assessed. Hand grip strength = 23 kg - Muscle function assessed. Gait speed = 0.6 m/sec - Sarcopenia diagnosed using EWGSOP 2 diagnostic criteria - Muscle mass and function tests repeated 6 weekly. ▪ Nutrition therapy - Soft high energy high protein diet and food from home allowed during inpatient admission. - Nasogastric tube (NGT) inserted due to inadequate oral intake and regurgitation of food. Monitored for refeeding syndrome on commencement of feeds. - Dietary counselling to support optimisation of oral intake and weaning of NGT feeds prior to surgery. ▪ Exercise therapy - Regular review during inpatient admission to provide mobility recommendations and prescription of individualised exercises. - Focus on resistance training (using body weight and resistance bans) during prehabilitation prior to surgery, with exercises for all major muscle groups. 2 sets of 8 repetitions, progressing in load (bodyweight > bands) or volume (2-3 sets, 6-12 repetitions) as tolerated to achieve target RPE4-

	6/10. Exercises including squat/sit to stand; bridge; banded row; bench press up; step up; calf raise. ▪ Multidisciplinary care - Clear communication was required between surgical and oncology multidisciplinary team and rural health care professionals. - Referral to social work and refugee service for practical support. - Screened in the high-risk range for a depressive disorder on the Patient Health Questionnaire-9 and moderate-risk range for an anxiety disorder on the Generalised Anxiety Disorder-7. Referred to psychology for intervention and support with trauma-related distress, low mood and persistent worry, with the goal of improving his engagement in prehabilitation and enhancing his readiness for surgery. - Attended weekly psychology sessions prior to surgery focussed on: (1) cognitive behavioural therapy for stabilising mood and managing worries; and (2) motivational interviewing to support engagement in exercise and nutritional therapy prior to surgery. - Psychology liaised with multi-disciplinary team members to collaboratively address barriers to Ahmed engaging in preparation for surgery and support trauma-informed exercise and nutrition therapy. ▪ Transition of care - Dietitian and physiotherapist at treatment centre provided handover to community-based dietitian and exercise physiologist for prehabilitation prior to surgery.
WHO delivered the care? **(Actor)**	• Malnutrition and sarcopenia screening – *nursing staff* • Nutrition assessment and intervention – *specialist oncology dietitian and community dietitian* • Physical assessment and intervention – *inpatient physiotherapist and community exercise physiologist* • Symptom management – *medical and nursing staff* • Multidisciplinary care - *social work, speech pathologist, psychologist, interpreter service, CALD support service, refugee service*
WHERE was care delivered? **(Context)**	Inpatient and outpatient setting Treating cancer centre and home-based care
WHO received care? **(Target)**	Adult patient (≥18 years) undergoing neo-adjuvant treatment and prehabilitation prior to surgery.
WHEN was care provided? **(Time)**	• Malnutrition and sarcopenia screening – *day 1 of inpatient admission* • Nutrition/physiotherapy assessment – *day 2 of inpatient admission* • Nutrition/physiotherapy review – *at regular intervals during neo-adjuvant treatment and prehabilitation* • Repeat nutrition/physiotherapy assessment - *post neo-adjuvant treatment and prior to surgery*

OUTCOMES

Ahmed was able to optimise nutritional intake with the use of early intervention NGT feeding and therefore proceeded with curative intent neo-adjuvant treatment.

Prehabilitation allowed Ahmed to improve his nutritional status, physical function and psychological wellbeing prior to surgery reducing the risk of post-operative complications.