D-00-07-30243

CLINICAL PRACTICE DOCUMENT

Amputation/Lower Limb

SITE APPLICABILITY:

VGH

PRACTICE LEVEL:

RN, LPN

NEED TO KNOW:

The majority of lower limb amputations are performed because of peripheral vascular disease. Upper extremity amputations are usually related to severe trauma. Indications for amputation include: rest pain (where revascularization is not possible), ischemic gangrene (associated with severe pain, disability and a high risk of progression of necrosis), infection (diabetics at higher risk; the infection may be local, diffuse or necrotizing), uncontrolled sepsis (i.e. gangrene), extensive muscle necrosis following an acute arterial occlusion, and severe trauma (i.e. crushing injuries).

Considerations in selecting the level of amputation include: wound healing, optimum function, preservation of the joint (i.e. knee), potential for rehabilitation and increase in mortality/morbidity (risk of complications increase with higher levels of amputations). Amputations are most often closed, but open or guillotine amputations may also be performed. Complications of amputation are often related to co-existing medical conditions, and may include: thrombo-embolic event (related to immobility), delayed wound healing (related to impaired tissue perfusion, diabetes or sarcoma), infection, flexion contractures, phantom pain, and discomfort while sitting.

PROTOCOL:

Provide pre-operative assessment/teaching (if possible) to patient and family	• provide teaching regarding amputation and rehabilitation using teaching booklet "leg amputation" • access other disciplines as appropriate to provide information/support and to assist patient/family in decision-making, e.g. rehab physician, prothetist, physiotherapist, OT, social worker.
Assess for/treat stumpedema	• assess for stump edema - should be able to slide fingers below tensor/dressing • elevate stump on a pillow for 24 hours only, then keep flat (foot of bed may be raised 15 degrees if elevation still required) • monitor stump for CSMW and ischemic changes • support stump on padded extension board while up in wheelchair (stump not to be dependent) • obtain physician's order for referral to prosthetist for a 'stump shrinker' • After initial 5 days, remove tensor /dressing for a.m. care and q8h x 20 minutes (note: the tensor/dressing is usually left in place (together with HMV & PNB (peripheral nerve block)) x 5 days post op; check with physician
Assess for flexion contracture	assess q shift for developing knee flexion (review with physiotherapist); keep knee straight teach patient and supervise positioning for correct alignment, i.e., no hip abduction or external rotation avoid high fowlers except for meals initiate early mobilization in wheelchair for 45 minutes each time (maximum); obtain direction from physiotherapist commence physiotherapy re: lying prone & supine; (obtain direction from physiotherapist re: positioning) supervise and reinforce exercise program as outlined by physio; note and record degree of knee contracture (if any) no pillows under stump after first 24 hours encourage patient to lie flat in bed 3-4 times/day if unable to tolerate prone lying.
Assist patient to manage impaired mobility	consult occupational therapist pre-op to arrange a customized wheelchair, i.e., cushion and extension board • obtain a Balkan frame for bed • supervise transfers and exercise regime until patient is independent • initiate referral to rehabilitation facility (as ordered) • initiate falls protocol (if appropriate) - ensure patient has proper footwear
Pre operative and Post operative assessment of pain; particularly for neuropathic/phantom pain post operatively (it is critical that pain be managed effectively both pre & post amputation)	• assess and document pain as per CPD P–075 Pain Assessment and Documentation • particular attention should be paid to the presence or development of neuropathic pain symptoms • if pain is uncontrolled pre-operatively; consult Peri-operative Pain Service (POPS) • POPS must also follow the patient post operatively • Ensure written and verbal pain management education is frequently reinforced • consult physio re: positioning techniques

If amputation done for sarcoma:

Assess for/prevent pathological fractures (related to demineralization of bones caused by tumor)	• teach patient to avoid sudden jarring or traumatic movements on affected side

PLEASE NOTE: UNDER REVIEW

PATIENT / CLIENT / RESIDENT EDUCATION:

The patient and/or family will:

- verbalize the goal of treatment
- be aware of follow-up arrangements for rehab/physio and appropriate resources (i.e. social work, support programs)
- verbalize an understanding of the rehabilitation process prior to discharge
- state the importance of inspecting the stump daily for signs of infection/breakdown
- demonstrate correct stump care
- understands patient pamphlet "Leg Amputation"
- understand patient pamphlet 'Pain After Surgery' and the pain management pamphlet specific to the patients pain management i.e., 'epidural analgesia' or 'PCA'

RELATED DOCUMENTS:

- Falls and Injury Prevention Guideline in Acute Care

Patient Pamphlets:

- Pain Control After Surgery
- Epidural Analgesia
- Patient Controlled Analgesia
- Peripheral Nerve Block

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