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CHEMICAL LUMBAR SYMPATHECTOMY IN A PATIENT WITH TWO TIMES FAILED AORTOFEMORAL BYPASS GRAFT WITH NON HEALING POST AMPUTATION WOUND WITH CHRONIC ISCHEMIC PAIN.

Anaesthesiology

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ABSTRACT

The essential aim of lumbar sympathectomy is denervation of sympathetic stimulation via adrenergic receptors in blood vessels. The resultant dilatation of small veins and arteries leads to improvement of tissue blood supply. It alleviates pain such as complex regional pain syndromes (CRPS), Buerger's disease, phantom limb and improves non healing ulcers in peripheral vascular disease (PVD). We discuss a case of 55 year old female patient, k/c/o PVD right leg, presenting to the pain clinic with a non healing post amputation wound with severe ischemic pain with two times failed aortofemoral bypass graft managed with chemical lumbar sympathectomy.

KEYWORDS

Lumbar sympathectomy, non healing wound, ischemic pain, peripheral vascular disease.

INTRODUCTION

Lumbar sympathectomy refers to the denervation of sympathetic transmission in alpha adrenergic receptors of blood vessels resulting in dilation of veins and small arteries leading to improvement of peripheral tissue blood supply.[1] It is indicated in ischemic pain of CRPS, Buerger's disease, phantom limb and for non healing ulcers in PVD.

CASE REPORT

A 55 year old female, k/c/o PVD right lower limb, presented to the pain clinic with complaints of severe pain in above knee amputation wound right lower limb for the past 7 months with a non healing ulcerated wound. She was a non diabetic , non smoker with no other comorbidity. She presented to the hospital for the first time as acute limb ischemia 7 months back with a one week old pain right lower limb with a dry gangrene right greater toe. CT angiogram showed a mixed plaque at the bifurcation of right common iliac artery with 75% stenosis. Emergency embolectomy was done followed by elective aortofemoral bypass grafting and patient discharged on oral anticoagulants. 4 months later the patient presented again with an ischemic ulcer right heel, wasting of right calf muscle , absent peripheral pulses right lower limb. CT angiogram confirmed graft occlusion for which an emergency embolectomy and above knee amputation was done.

Patient continued to experience severe pain and a non healing post amputation wound for which she was referred to the pain clinic. She graded her pain 10/10 on the Visual Analog Scale (VAS), describing the pain as sharp, localised and continuous in nature.

Patient was planned for chemical lumbar sympathectomy. Tab Clopidogrel 75mg and Tab Warfarin 0.5mg were omitted 5 days prior to the procedure with bridging to low molecular weight heparin(LMWH). Tab Aspirin 75mg was continued. Morning dose of LMWH was omitted on day of procedure. Patient was taken in OT after appropriate informed consent,all standard monitoring attached and pre procedure vitals noted. Procedural sedation using Inj Fentanyl 30 mcg iv and Inj Ondanseteron 4mg iv was given. Following strict aseptic precautions, in prone position and under flouroscopic guidance , a 22G long spinal needle was inserted anterolateral to the body of L3 vertebra and position of the needle confirmed using contrast agent. A diagnostic block using 12ml 1% Inj Lignocaine was given and effect confirmed with local increase in temperature of the affected side.Chemical sympathectomy was achieved using 10ml Inj Phenol (5%). Local increase in temperature was noted. Post procedure vitals were noted and patient shifted to post op ward for further monitoring. Pain scores were noted 15min, 1hr , 6 hr, day 2, 1 week and 4 weeks post procedure. It was found that VAS had reduced from 10/10 to 3/10 with a visible healing of wound. After 4 weeks, there was no evident resting pain to the patient and pain on activity was responsive to NSAIDS.

DISCUSSION

Lumbar sympathectomy results in long term persistent dilatation of small vessels and increased vascular supply to skin and subcutaneous tissue in the distal part of the limb. The resultant increased peripheral blood supply is related with markedly decreased risk of infection in the persisting ulceration.[1] It can produce significant healing in a patient and has a role in reduction of pain scores.[3]

The assessment of lumbar sympathectomy efficiency may be performed with temperature measurement, USG examination of the lower extremities and laser doppler flows.[2]

Complications include transient neuralgia, insufficient clinical improvement and steal syndrome.

CONCLUSION

Lumbar sympathectomy remarkably improves patient's quality of life and is a safe alternative for analgesia and wound healing in failed surgical interventions.

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