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NIV (Non-invasive ventilation) - Extended scope of practice for respiratory physiotherapists

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The role of a Respiratory Physiotherapist is vital for Patients with Respiratory diseases like COPD, ILD, Asthma, Lung Cancer, Respiratory Failure by interventions like Maintaining Oximetry, O₂ therapy, Teaching Inhaler techniques, Bronchial hygiene techniques, Chest PT, 6MWT, Mobilization etc. But still NIV remains underutilized by Physiotherapists. NIV has been evolved from Big Machines (in 1950) to Smart Devices (in 2000). It is a provision of Assisted Ventilation without Endotracheal Intubation. Studies have shown Underutilization of NIV & Low rates of perceived efficacy as Major findings. Reasons for Low utilization like Physician's Lack of knowledge, Equipments not appropriate, Respiratory staff inadequately trained & poor previous experience are major among others. There are many studies which prove the benefits of NIV. Strongest evidence is in COPD and Acute Cardiogenic Pulmonary edema where NIV prevents Intubation. NIV Use Improves Chances of Survival in Acute Respiratory Failure. It tends to reduce mortality in ICU, hospital & reduces need for therapeutic interventions. I will be discussing in this session Basics of NIV – Patient selection/ Indications/ Contraindications/ Settings & Parameters/ Initiation/ Optimization/ Goals of NIV, the different devices & interfaces available, monitoring of patients on NIV, criteria for NIV success or failure- identification/ causes/ rectification, common problems & solutions of using NIV and clinical evidence on NIV.

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Effect of acupuncture on upper trapezius muscle spasm- A review study

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The aim of this literature review is to compare results of different studies with clinical data on the effects of acupuncture in reducing spasm of upper trapezius muscle, whatever the cause of this symptom is. Assuming biochemical principle, that muscle spasm is due to accumulation of lactic acid through exaggerated anaerobic work due to nervous or mechanical pain, an improvement of blood supply would eliminate an excessive deposit of lactates, a significant flow of oxygen would prevent such accumulation. This decreases pain, muscle spasm & increases painless range of motion. Various studies have shown that acupuncture has a positive effect on one of the links in the chain, & consequently could be used as first attempt treatment to reduce muscle spasm. Pathologies (Cervical dystonia, non irradiating cervical neck pain, neck & shoulder stiffness, fibromyalgia, and work related trapezius myalgia) & techniques (Needling depth, needle stimulation and selected points) were varied, but produced similar results concerning muscle spasm. This confirms that local & lasting effect could be sought through several acupuncture techniques, & the techniques that couldn't prove their utility aren't respecting TCM principles. Testing a protocol uses Photoplethysmographic, EMG, Cervical Range of Motion, laser Doppler before / after medication intake (muscle relaxant) & compare outcomes with those before / after deep needling with manipulation. Improvement of local blood flow, oxygenation, and stiffness confirms usefulness of acupuncture, which could serve as a "guideline" for the treatment of upper trapezius muscle spasm & impact on patient's quality of life.

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