

The 10,000 Fold Effect Retrograde Neurotransmission: A Newer Concept for Paraplegia's Physiological Revival by the Use of Intrathecal Sodium Nitroprusside

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Abstract : B-Methylprednisolone-level-1-benefit (20%) usually given in paraplegia (but within 8hrs). Patients wait-long-duration for physiological-recovery. Intrathecal-Sodium-Nitroprusside(ITSNP) has been used-in vasospasm-due-to-subarachnoid-hemorrhage. ITSNP-has been studied-here for wide-window-period-range for-treatment, fast-recovery/affordability. 2- for acute-cases-and 1-mechanism-for chronic-cases, which-are-interrelated, are being-proposed-for-physiological-recovery. retrograde-neurotransmission, vasospasm and long-term-potential(ltp) mechanisms are proposed here for recovery. It's a case-control-prospective-study. 82paraplegia-patients(10patients taken as control-no superfusion or dextrose5% superfusion and 72patients as ITSNP-group). The mean time for superfusion was 14.11 days. ITSNP administered at a dosage of 0.2 mg/kg bo wt. Pre/post ITSNP monitored by SSEP/MEP. After-2-Hours in ITSNP-group Mean-Change-From-Baseline-Asia Motor/Sensory-Score 13.84%/13.10%, after-24-hours MOTOR-1.27-points decrease(3.77%) and SENSORY 10.5points-increase(6.22%)as compared to Control-group no-change noted upto 24-hours, At-7days ITSNP motor/sensory;11.56%/6.22% as compared to Control-group 7.60/4.48%, At-2-months in ITSNP 27.69%/6.22% as compared to Control-group 16.02/4.5%. SSEP/MEP-documented-improvements-noted. ITSNP, a-swift-acting-drug in treatment-of-paraplegia, is effective within-two-hours(mean-change-MOTOR-13.84% and SENSORY-13.10%) on-mean14.11th postparaplegia-day with a small-detrimental-response after-24-hours which-recovers-fast.

Keywords : paraplegias, intrathecal sodium nitroprusside, retrograde transmission, the 10,000 fold effect, perforators, vasodilatations, long term potencies

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