Neurologic Remediation Post Ischemic Stroke: An Integrated Literature Review

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To date, tissue plasminogen activator (tPA) is one of the only FDA approved treatments for patients presenting with symptomatic ischemic stroke. The narrow therapeutic window range of 3 – 4.5 hours poses a serious set-back in recovery and neurological remediation rates. Furthermore, the vast majority of stroke patients cannot get access to treatment within the narrowly defined time limits. Beyond the acute time period, there is evidence that physical rehabilitation focused on the injured area is effective. However, neurological recovery with physical rehabilitation is rarely complete.

Despite high morbidity, mortality and cost, only treatment with clinical efficacy makes sense. Intracranial thrombolysis in area of occlusion and Mechanical catheter to clear and aspirate occlusion may be used. Stem Cells are suggested in the use of neuroregeneration post stroke by replacing the cells that have died with stem cells to replicate and function as human cells. G-CSF and Citocline may inhibit ischemic cascade and increase neuroplasticity. Mild Hypothermia may salvage or post-pone damage to compromised brain tissue. Tenecteplase - a genetically mutated form of tPA - longer half-life with more fibrin specificity = faster clot lysis with less bleeding.

In this review, the four constructs of the Health Belief Model - initial threat to health, cue to action, perceived benefits outweighing barriers/risks and undertaking of preventative action have guided the entirety of this project in design, reporting and evaluation of the current standards, knowledge and treatments ischemic stroke (see below).