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O-FUN-14 - DBS and Parkinson's disease – Two-step strategy

M.D. Belo, J.P. Lavrador, M.B. Catton and H. Carvalho

Grupo de Cirurgia de Doenças do Movimento do HSM; Serviço de Neurocirurgia CHLN/Hospital Santa Maria, Lisboa.

Resumen

Introduction: Implant infection in DBS surgery is one feared complication. The growing number of DBS surgeries performed and use in a broader number of pathologies, may lead to a rising number of infections. There are no globally accepted guidelines for preventing this complication.

Material and methods: A cohort study was performed including all patients submitted to DBS surgery for Parkinson's disease during the time period ranging from 2006 to 2015. Our group adopted in 2010 a two-step surgery, dividing the long DBS surgery procedure into two shorter ones. Data was divided into early infections (occurring in the first 90 days) and late infections (after 90 days). Our primary outcome was the infection rate in both groups and secondary outcomes were early infection rate (≤ 90 days), late infection rate (> 90 days), time-to-infection, infection per year, infection site and involved microorganism.

Results: Total population included 190 patients (61.58% (n = 117) males, 38.42% (n = 73) females), 44% (n = 77) in the 1-procedure group and 56% (n = 107) in the 2-procedure group. Considering our primary outcome, 8 infections were diagnosed in the 1-procedure group (infection rate of 8.2%) and 1 in the two-procedure group (infections rate of 0.54%) – p value = 0.041. Early infections were detected only in the 1-procedure group (2.1% - n = 4 - versus 0%, p-value = 0.033).

Conclusions: A standardized definition of surgical site infection and treatment guidelines are required. Our results indicate that splitting DBS surgery for Parkinson's into a two-phase surgery may actually decrease the rate of infection, as opposed to the classic procedure practiced in most centers.