Closed system drainage

There is controversy among neurosurgeons regarding whether irrigation or drainage is necessary for achieving a lower revision rate for the treatment of chronic subdural hematoma (CSDH) using burr hole craniostomy (BHC). Therefore, Xu et al. performed a metaanalysis of all available published reports. Multiple electronic health databases were searched to identify all studies published between 1989 and June 2012 that compared irrigation and drainage. Data were processed by using Review Manager 5.1.6. Effect sizes are expressed as pooled odds ratio (OR) estimates. Due to heterogeneity between studies, we used the random effect of the inverse variance weighted method to perform the meta-analysis. Thirteen published reports were selected for this meta-analysis. The comprehensive results indicated that there were no statistically significant differences in mortality or complication rates between drainage and no drainage ($P > 0.05$). Additionally, there were no differences in recurrence between irrigation and no irrigation ($P > 0.05$). However, the difference between drainage and no drainage in recurrence rate reached statistical significance ($P < 0.01$). The results from this meta-analysis suggest that burr-hole surgery with closed-system drainage can reduce the recurrence of CSDH; however, irrigation is not necessary for every patient [1].

1)
Xu C, Chen S, Yuan L, Jing Y. Burr-hole Irrigation with Closed-system Drainage for the Treatment of Chronic Subdural Hematoma: A Meta-analysis. Neurol Med Chir (Tokyo). 2015 Sep 17. [Epub ahead of print] PubMed PMID: 26377830.