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ePoster Viewing

Surgical site infections

Efficacy and cost of three different antimicrobial prophylaxis drugs in microsurgical transsphenoidal surgery: a preliminary report

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Background: Antimicrobial prophylaxis (AMP) drugs for neurosurgery, including operations of elective craniotomy, cerebrospinal fluid shunting procedures and intrathecal pumps are apparently clear in guidelines. On the contrary, there is no comprehensible recommendation for transsphenoidal surgery (TSS). TSS is a quite safe procedure and infectious complications are infrequent. Then do we really need an antibacterial prophylaxis for TSS or what is the optimal antibiotic choice and duration? Previous studies reported low incidence of meningitis and sinusitis after TSS with different AMP drugs usually did not have comparison group. So a comparative study is needed to determine appropriate option of AMP for TSS.

The aim of this study was to compare the efficacy and cost of three different AMP drug (ceftriaxone, cefazolin or intranasal fusidic acid) in TSS.

Material/methods: The clinical records of adult patients who received chemoprophylaxis with two doses cefazolin (n:32; 30 min before and 8 hours after operation) or one doses ceftriaxone (n:50, 30 min before operation) or fucidic acid drops (intranasal) 1 % on three days (n:22 two times one day) in TSS were analyzed retrospectively. Only single experienced neurosurgeon's (AS) patients were included into the study, and patients who had complication of large cerebrospinal fluid leak was excluded. Patients followed up for 30 days after surgery.

Results: During the study period, 104 patients records were evaluated. The mean age of these patients was 44.79 and 54 % was male, 46% was female. No case of peri- and post-operative meningitis or any other infections occurred in all groups. Cost analysis was as follows; 5.32€ for cefazolin, 1.33€ for ceftriaxone and 2.5 € for fucidic acid drops.

Conclusions: Compared three AMP drugs for TSS found similarly effective with no reported infectious complication. Though the infection risk for TSS is very low, cost and ease of use should be evaluated for the drug of choice.