Study of Prevalence, Risk Factors and Outcomes of Abdominal Pseudocyst (APC) in Patients with Coccidioidal Meningitis (CM) and Ventriculoperitoneal Shunts (VPS)

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INTRODUCTION

- Coccidioidal meningitis(CM) is the most feared complication of coccidioidomycosis
- Ventriculoperitoneal shunts(VPS) are frequently employed to relieve the hydrocephalus in these patients
- Abdominal pseudocyst(APC) is a rare complication of VPS with a reported incidence of 1-5%
- Risk factors associated with APC are shunt infection and multiple shunt revisions

OBJECTIVE

- The objective of our study was to evaluate the prevalence, predisposing factors and outcomes of APC in patients with CM and VPS

METHODS

- We retrospectively reviewed the demographics, risk factors and outcomes of 33 patients(6 with APC) with CM and VPS at our institution during a 10 year period from 2000-2010
- Descriptive analysis was then performed

RESULTS

- Six of 33 patients with CM and VPS developed APC (group 1)
- The baseline characteristics and pertinent results are summarised in table 1
- Figure 1 illustrates the prevalence of APC
- Non compliance with antifungal therapy was strongly associated with APC as shown in Figure 2
- Shunt infection was not identified in group 1 but present in 4 patients in group 2
- There was a trend towards positive cerebrospinal fluid (CSF) fungal cultures (50% Vs 29%) and CSF coccidioidomycosis serology greater than 1:16 (66% Vs 26%) in group 1-Figure 3

Table One

	Group 1 n=6	Group 2 n=27
Mean Age	34 +/- 7	49+/-16
Race	Hispanic-5 Caucasian-1	Hispanic-19 Africanamerican-3 Asian-2 Unspecified-3
Sex	Male-4 Female-2	Male-23 Female-4
Comorbidities	Diabetes Mellitus 2(DM2)- 1	DM2-5 Human immunodeficiency virus-1
Positive fungal cultures on the cerebrospinal fluid(Csf)	3(50%)	8(29%)
Positive Csf coccidioidomycosis serology >1:16	4(66%)	7(26%)
Average Csf protein	287+/-311	332+/578
Average Csf WBC	111+/-145	142+/-189
Mean number of shunt revisions	2	1.8
Shunt infection	0	4
Non compliance with antifungal *P*=0.06	3(50%)	3(11%)
Mortality	1	7

Figure 1
Prevalence of APC

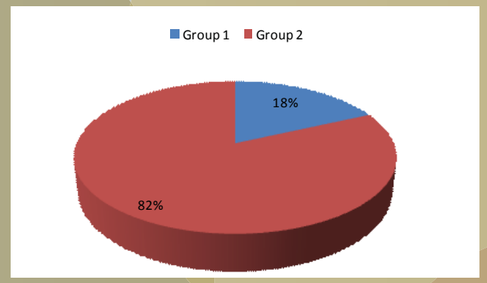


Figure 2
Non compliance with antifungal therapy

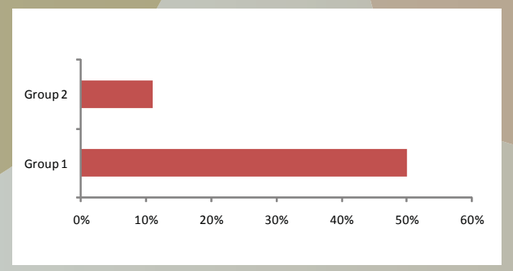
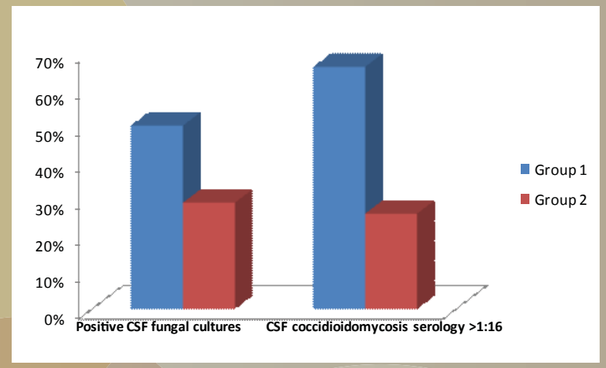


Figure 3
Positive CSF fungal cultures and CSF coccidioidomycosis serology >1:16



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RESULTS

- The prevalence of APC at our institution was 18%
- Non compliance with antifungal therapy was an independent risk factor for development of APC
- Positive fungal cultures in CSF and high CSF coccidioidomycosis serology may predispose to APC
- The groups are small to assess differences in mortality and large prospective studies are necessary to confirm the observation in our study

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