Background

Recommendations for managing patients with cerebral cryptococcomas are scarce across multiple clinical guidelines. Due to the deficiency of high-quality data coupled with increasing number of at-risk patients, the purpose of this review is to describe the demographic characteristics, causative pathogen, intracranial imaging, surgical and/or pharmacological interventions, as well as outcomes of patients with cerebral cryptococcomas to improve recognition and management.

Methods

We conducted a scoping review in accordance with the PRISMA guidelines using PubMed and Web of Science. Reports were included if the following details were presented: 1) site of infection, 2) treatment details to at least include the specific antifungal therapy administered, if applicable, and 3) patient outcome.

Results

A total of 40 records representing 47 individual patients were included of which the median age was 48.5 years, 75% were male, and 60% reported a significant past medical, surgical, or social history. *C. neoformans* was isolated more often than *C. gattii* (74% vs 26%, respectively). Patients most often presented with headache, altered mental status and/or confusion, and vomiting occurring over a median of 30 days, though few were noted to have significant findings on physical examination. More than 50% of patients had a single cerebral cryptococcoma lesion, while perilesional edema was present in 73% of cases. Surgical intervention occurred in 49% of patients. An amphotericin B-based formulation was administered as 'induction' therapy to 91% of patients but combined with flucytosine or fluconazole in only 58%, for an overall median of 42 days. Fifty two percent of patients received 'maintenance' therapy for a median of 126 days,

in which fluconazole was most often used. Corticosteroids were administered to approximately 30% of patients for a median of 31.5 days. Overall, mortality was 34%.

Conclusion

Based on our findings, management should include antifungal therapy for a minimum of 6 months with considerations for concomitant corticosteroids in the setting of perilesional edema as well as surgical intervention. Emphasis should be placed on providing well-documented treatment details in future case reports and series to allow for development of more concise evidence-based recommendations.