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Amphotericin-B/amphotericin-B-liposomal

Lack of efficacy: 2 case reports

A case series described an 11-year-old boy and a 13-year-old girl; they experienced a lack of efficacy during treatment with amphotericin-B or amphotericin-B-liposomal for COVID-19-associated rhino-orbito-cerebral mucormycosis [ROCM; not all routes and dosages stated].

Case 1: An 11-year-old boy, whose medical history was significant for type-1 diabetes mellitus, diabetic ketoacidosis and a previous COVID-19 infection, presented to hospital in India with weight loss, pain and swelling of his left eye, and high grade fever. Subsequent analyses led to the diagnosis of COVID-19-associated ROCM. Hence, he underwent bifrontal craniotomy with cortisectomy in bilateral middle frontal gyrus. Post-operatively, he received retrobulbar injection of 1mL amphotericin-B-liposomal 3.5 mg/mL every 48 hours. In addition, he received IV amphotericin-B-liposomal 10 mg/kg/day in 5% glucose [dextrose] over 1 hour for 6 weeks, alongside ceftriaxone, amikacin and metronidazole for 3 days. He also received insulin [Human Actrapid]. However, the treatment with amphotericin-B-liposomal was unsuccessful, and he eventually underwent orbital exenteration.

Case 2: A 13-year-old girl, whose medical history was significant for diabetic ketoacidosis and type-1 diabetes mellitus, for which she had been receiving insulin [regular insulin] and insulin suspension isophane [isophane insulin; Mixtard], presented to hospital in India with pain, swelling and diplopia in her left eye. She incidentally tested positive for COVID-19. Subsequent analyses led to the diagnosis of COVID-19-associated ROCM. Hence, she started receiving amphotericin-B [amphotericin B deoxycholate]. However, the treatment was unsuccessful; hence, she underwent left frontotemporal craniotomy with left temporal cortisectomy. Post-operatively, she received retrobulbar injection of 1mL amphotericin-B-liposomal 3.5 mg/mL every 48 hours. In addition, she received IV amphotericin-B-liposomal 10 mg/kg/day in 5% glucose over 1 hour for 6 weeks, alongside ceftriaxone, amikacin and metronidazole for 3 days. She also received insulin [Human Actrapid]. However, the treatment with amphotericin-B-liposomal was unsuccessful, and she eventually underwent orbital exenteration.

Diwakar J, et al. First report of COVID-19-associated rhino-orbito-cerebral mucormycosis in pediatric patients with type 1 diabetes mellitus. Journal de Mycologie Medicale 31: No. 4, Dec 2021. Available from: URL: http://doi.org/10.1016/j.mycmed.2021.101203

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