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Uncontrolled Type 2 Diabetes Mellitus with Systemic Hypertension with Acute Invasive Fungal Sinusitis with Cerebral Abscess with Posterior Ischaemic Optic Neuropathy: A Rare Case Report

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Type of Publication: A Case Report

Conflicts of Interest: Nil

Abstract

Case

A 62 year old Female patient who is a known Diabetic & hypertensive since last 15 years on irregular medications was admitted in Dr. BRAM Hospital, Raipur in February 2022, with complaints of Fever, non productive Cough of 3-4 weeks duration , Sudden painless loss of vision in right eye. General physical examination could not find any specific abnormality. Visual Acquity Right eye was PL absent in all four quadrants with relative afferent pupillary defect, fundoscopy revealed Disc pallor and clear media while left eye was grossly normal.

Investigations: CBC: Hb-8.7 MCV- 77 PLT-331.2 TLC-9.40(N-68, L-26), ESR – 73 FHR, PPBS /FBS- 322/212, Urine sugar ++, Urine ketone – Nil HbA1C- 9.2 RFT, LFT, Serum lipid profile was within normal limit. CECT HEAD revealed Brain abscess (39x22x20mm) in right frontal lobe with erosion of right lamina papyracea, right ethmoid sinus and cribriform plate. (Fig. 1 & 2). MRI Brain showed Sinusitis involving right sided paranasal sinuses, orbital cellulitis with loss of normal architecture and diffusion restriction measuring (42x22x20) mm in size with shaggy enhancing margin involving right basifrontal lobe with adjacent vasogenic edema suggestive of cerebritis with cerebral abscess (evolving). Diffuse restriction involving posterior half of right optic nerve s/o acute Posterior ischaemic optic neuropathy. (Fig.3)

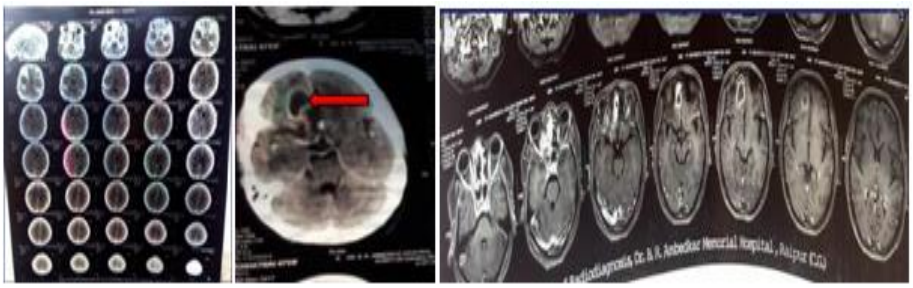

Fig. 1 (CECT Head) Fig.2 (CECT Head) Fig.3 (MRI Brain P+C)

FESS (Functional endoscopic sinus surgery) was done which showed Fungal debris in Right & Left nasal cavity, septal perforation in posterior end of septum with granulation tissue in right ethmoid sinus. Biopsy was collected sample sent for HPE which revealed fungal hyphae (aspergilus species). Systemic antifungal agents in the form of InjAmphoterecin B after performing sensitivity test we have given 1mg/kg for 4 weeks followed by TabItraconazole 200mg TDS for 3 days then 200mg BD for 3 months along with iv antibiotics in the form of ceftriaxone was given for 4 weeks shifting to oral Cefuroxime 500 mg twice daily for further 2 weeks, iv anticonvulsants & iv Dexamethasone and tab Telmisartan for Systemic Hypertension. Diabetes was treated with Regular and Biphasic insulin. Patient was discharged in improved condition and is asked to come for follow up every 7 days.

S.NO.	PARAMETERS	ON ADMISSION	ON DISCHARGE
1	BLOOD SUGAR (PPBS/FBS)	322/212	153/112
2	HbA1C	9.2	8.5
3	SIZE OF FRONTAL ABSCESS	(42x22x20)	(36x18x17mm)

Discussion

Several Case reports have discus sed fungal infections of the brain and orbit in diabetics, including mucormycosis in recent epidemic of SARS Coronavirus 2019. But there are only a few reports of Brain abscess and orbital cellulitis involving optic nerve leading to Posterior ischaemic optic neuroapthy, which makes the current case report a rare presentation of uncontrolled diabetes.Razali NR, Choo YM[1] 2021, reported a case of pre orbital cellulitis in a 58 year old diabetic patient who recovered well on conservative therapy.[1]

Conclusion

Orbital and nasal Complications in Dibaetic patients require prompt treatment in the early phases of illness to prevent further progression of the disease to brain parenchyma which makes it life threatening. Patient education and strict diabetic control pays a pivotal role in management of such life threatening complications. Furthermore studies are required in this field to know thw magnitude of this problem, so that necessary steps are taken for their prevention and management.

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