Cluster headache: Clinical aspects and therapy with neurostimulation

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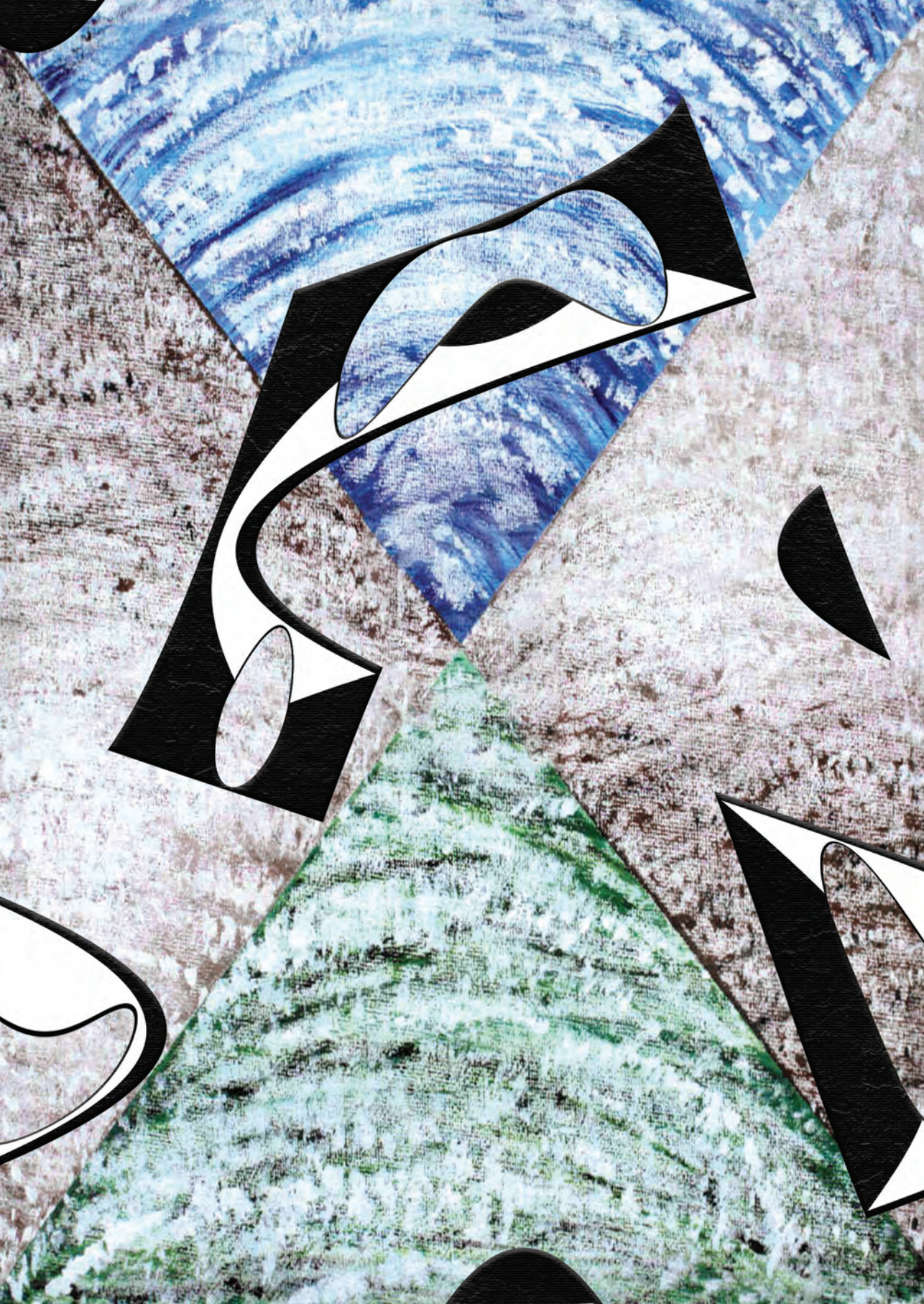


PART II
Therapy with neurostimulation

CHAPTER 9

Effective occipital nerve stimulation during pregnancy in a cluster headache patient

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Letter to the Editor

Dear Editor,

Cluster headache is a rare primary headache disorder characterized by attacks of excruciating, intermitting short-lasting unilateral temporal or orbital pain.[1] Cluster headache in pregnancy can be difficult to treat because of a limitation in treatment options. The only acute treatment that is not harmful during pregnancy is oxygen inhalation. However, this is effective in about 60% of patients.[2,3] Sumatriptan can be considered, but is not recommended during pregnancy due to a lack of controlled prospective studies about prenatal toxicity. However, a retrospective study of over 600 women reported a lower rate of congenital malformations in children of women who had been using sumatriptan during their pregnancy than in the average population and another observational study reported no signal of teratogenicity associated with major birth defects for sumatriptan.[4,5] The available prophylactic drug treatments are not recommended during the pregnancy because of a lack of controlled prospective studies about their prenatal toxicity.[6] Here, we report a possible alternative prophylactic cluster headache treatment during pregnancy.

A 32-year-old woman, suffering from cluster headache since the age of 25 years, was diagnosed with medically intractable chronic cluster headache with an average of nine attacks per week. She participated in our ongoing study on occipital nerve stimulation (ONS) in chronic cluster headache as prophylactic treatment.[7] After the ONS implantation, her attack frequency dropped to once per week and the pain intensity of the remaining attacks diminished as well. Having at first decided to refrain from pregnancy due to the lack of possible attack treatment, she brought up her wish to become pregnant 18 months after ONS implantation. At that time, she used sumatriptan SC and oxygen as acute treatment and ONS as prophylactic treatment. Shortly thereafter, she indeed became pregnant. During the first 3 months of her pregnancy she refrained from sumatriptan SC and treated the remaining cluster headache attacks successfully with oxygen (9 L/min). An ultrasound after 10 weeks pregnancy did not show any foetal abnormalities. During the second trimester she only needed

sumatriptan SC once, the attack frequency had dropped to one attack per 2 weeks. Another ultrasound after 20 weeks of pregnancy also showed no abnormalities. During the last trimester, attack frequency further dropped to one attack per 6 weeks, for which oxygen remained effective. At 35 weeks of pregnancy she did not recharge her ONS battery correctly and noticed an increase of cluster headache attacks to one attack per day 10 days later. At that time, she recharged the ONS correctly. She did not notice a decrease in attacks after turning the ONS on again. Parturition was induced at 38 weeks pregnancy because of these frequent cluster headache attacks. At that time, the ONS was turned off and switched on directly after she gave birth. The parturition was uncomplicated except for a surgical removal of the placenta. The baby made a good start and did not have any birth defects. The day after giving birth, high frequent severe cluster headache attacks occurred, which did not respond to oxygen. After consultation with the gynaecologist, breastfeeding was stopped and the patient received sumatriptan SC as acute treatment. The attack frequency and intensity diminished slowly. She became attack-free with ONS treatment after 4 weeks.

This is a unique case of an uncomplicated pregnancy in a patient having effective ONS treatment for chronic cluster headache. We therefore suggest that ONS can be an alternative preventive treatment for women of reproductive age with medically intractable cluster headache and a (future) wish to become pregnant, as it seems not to have any pharmacological influences during pregnancy and lactation. The frequency of attacks dropped during pregnancy until the last week before delivery, when the ONS was accidently off, due to inaccurate battery reloading. As no rechallenge took place, we do not know if the increase in attacks was caused by the withholding of continuous ONS, a possible hormonal influence or a fluctuation in the cluster headache pattern itself. From our own experience, we know that withholding ONS can result in an increase of cluster headache attacks after initial effective treatment. We suggest that a hormonal influence probably was unlikely, as earlier retrospective reports reported no relation between hormonal changes and cluster headache attacks.[8,9] However, prospective studies on cluster headache during pregnancy are lacking. Only in a few cases

was an increase or decrease in frequency or severity of cluster headache seen during pregnancy, but probably must be explained by the natural, fluctuating course of cluster headache.[9]

In conclusion, this case suggests that ONS is a safe and effective prophylactic treatment for cluster headache during pregnancy.

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