



Interesting cases NEUROLOGY

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Dear Doctor,

Greetings from Micro Labs Limited.

We are happy to bring you "Neurology case series", which contains latest and interesting cases in the field of Neurology.

This issue contains

1. Hemicrania continua Headache
2. Recurrent epistaxis from associated pseudoaneurysm of the internal carotid artery and inflamed granulated tissue
3. Concomitant treatment with calcitonin gene-related peptide receptor antibodies leading to extreme bruising in a migraine patient: a case report

Should you require any specific article or medical information, please feel free to contact us at medicalservices@microlabs.in

Looking forward to your valuable feedback

Best Regards,

Medical Team,

Hemicrania continua Headache

Patient Description:

A 66-year male subject presented with classic episodic cluster headaches for the previous 10 years. Headache was observed 8 times a day which starts with stabbing pain in the medial aspect of his right eye which spreads to the entire right side of his face, vertex and upper back of the head. The pain was associated with rhinorrhoea and obvious conjunctival injection in the right eye without oedema.

Subject was treated with a greater occipital nerve block comprising 40 mg methylprednisolone and 20 mg bupivacaine. Nerve block afforded him complete pain relief within minutes and lasted for 12 months. Intensity of headache subsided by mid-2016 and the subject was free from headache for 2.5 years.

The patient presented again to the pain clinic after suffering for 6 months stabbing pain radiating from the back of the right side of his head to the right side of both the vertex and forehead, right ear and towards the jaw. He had developed all the previous symptoms. Numerical Rating Scale Pain Score (NRS) was 6 out of 10. The subjects Pain severity reached an NRS score of 9 out of 10 for at least 2-3 times in a day.

Physical examination revealed right eye was mildly teary, with conjunctival injection and slight oedema of the eyelid. Hyperesthesia over the right vertex and right side of his forehead was observed. Palpation of the right Sternocleidomastoid muscle(SCM) elicited tenderness and the pain was exacerbated. This showed that the SCM muscle was the reason for severe headache. Hence 30 mg of 1% lidocaine was injected into the right SCM muscle. severity of his headache decreased within 4 min of the injection. Numbness across his forehead and vertex disappeared. Right-sided tearing and conjunctival injection was subsided. The subject was free from symptoms within 4 weeks.

He returned to the clinic to receive another injection. This time the muscle was injected with 20 mg lidocaine and 10 mg bupivacaine. Pain completely disappeared for a further 2 months.

In mid -December he was recommended to start on a low dose of indomethacin, 25 mg three times a day, and then increase the dose slowly. Within 24 h of the indomethacin, pain was relieved confirming the diagnosis of hemicrania continua.

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Indomethacin was discontinued due to the onset of severe gastric side effects. Six days later when his headache relapsed patient was then given another injection of 20 mg lidocaine and

10 mg bupivacaine into the right SCM muscle. During visits to the pain clinic for unrelated low back pain he reported, continuous headache as well as his cluster headaches were still in complete remission. This patient preferred to have periodic injections than suffer from indomethacin-related side effects because the injections had no side effects.

Discussion:

The SCM muscle is innervated by spinal nerves C2–3. When this muscle is either injured, strained or harbor's painful trigger points, a variety of clinical presentations, including headache, may develop.

Conclusion:

This case showed the importance of taking a proper history and performing a physical examination that includes the neck when evaluating patients with headaches. This is relevant when evaluating head and facial pain due to the intricate and converging sensory nerve supply to these regions. Methodical diagnosis of headache may enable safe, tolerable and effective treatments to be applied in lieu of medications that are well known to be associated with severe side effects and risks.

Reference:

Wende O, Markowitz S. Headache from clinically confirmed hemicrania continua arising from the sternocleidomastoid muscle: a case report. BMC neurology. 2021 May;21(1):1-4.

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Recurrent epistaxis from associated pseudoaneurysm of the internal carotid artery and inflamed granulated tissue

Patient description:

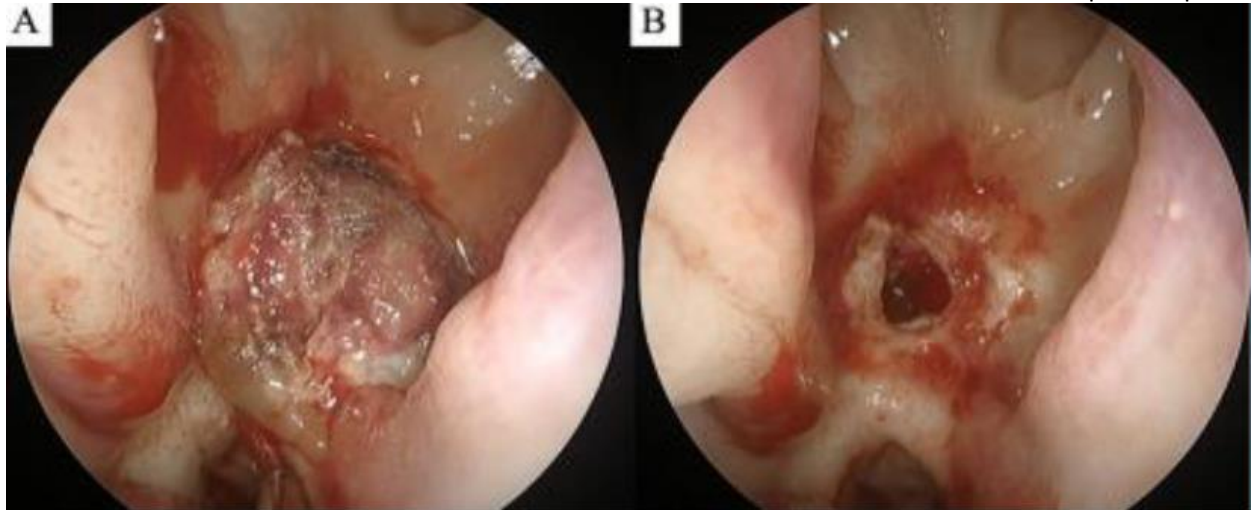
A 56-year-old man presented with recurrent right-sided epistaxis. The subject had a history of hypertension, hypothyroidism and surgical history of subtotal resection of a pituitary adenoma by transsphenoidal approach(TSA).

In 2018 the subject, visited the hospital with the complaints of recurrent epistaxis. After undergoing TSA surgery, the patient suffered from nosebleeds and blood-tinged sputum. On navigation-assisted endoscopy, polypoid mass with an oozing-pattern bleeding in the right sphenoid area was found and a biopsy was taken. The bleeding seemed to stop after endoscopic cauterization. Tissue obtained from the biopsy was inflamed granulation tissue. Intermittent nasal bleeding resumed after 10 months.

About 2L of blood loss due to epistaxis 9 months later, the subject was admitted to the emergency department. A bleeding focus on the anterior wall of the right sphenoid was Ultrasound image of the vagus nerve. (A) The vagus nerve (white arrow) of a patient with PD. (B) Delineation of the same vagus nerve following the hyperechoic epineurium. revealed by Emergent endoscopy. Computed tomography (CT) angiography demonstrated a pseudoaneurysm in the right internal carotid artery (ICA) that recovered from rupture in the area of the previous TSA. Right ICA pseudoaneurysm was inserted with a graft stent. A large nosebleed recurred, and a graft stent was re-inserted for the recurrent pseudoaneurysm rupture after 4 months. No evidence of recurrent flow in the treated pseudoaneurysm in the right distal ICA was revealed by a CT angiography taken 3 months later.

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Nasal endoscopy a) before and b) after resection of the nasal polypoid mass

Epistaxis accompanied by fever and sinus tenderness was observed by the patient. Peri-stent enhancement on the inferior medial side of the right nasal cavity was noted in a left external carotid artery (ECA) angiogram, and an accordant mass was seen on brain CT. MRI revealed multiple brain abscesses. Cerebrospinal fluid culture was negative. the patient underwent Endoscopic resection and was treated with the proper antibiotics. Ciprofloxacin was administered orally for 32 days. The resected mass was necrotic mucosal tissue with exudate and blood clots was revealed by histology. During the 5-month follow-up period, the operation site was well maintained without further bleeding, and brain MRI showed regressed abscesses.

Conclusion:

This case revealed the need to assess chronic inflammation when subjects complain of recurrent nosebleeds. The amount of blood from epistaxis caused by granulation tissue inside the nasal cavity is small. Chronic inflammation causes development of pseudoaneurysm and life-threatening bleeding. Inflammatory tissues should be removed along with the endovascular treatment of the pseudoaneurysm. Hence, subjects who have epistaxis after transsphenoidal approach, even if the bleeding is not in large amount, should be actively screened and treated for nasal chronic inflammation.

Reference:

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Kim JY, Kim YB, Chung J. Recurrent epistaxis from inflamed granulated tissue and an associated pseudoaneurysm of the internal carotid artery: case report. BMC neurology. 2021 June;21(1):1-6.

Concomitant treatment with calcitonin gene-related peptide receptor antibodies leading to extreme bruising in a migraine patient: a case report

Patient description:

A 41-year old female migraine subject was treated with erenumab 140 mg subcutaneously every 4 weeks. When the treatment was started the subject had 16 headache days a month of which 12 was migraine days. Frovatriptan, sumatriptan injections or eletriptan was used by the patient with successful pain mitigation between 3 to 8 days a month. She suffered from migraine since childhood except rare occasional small unnoticeable bruises during the past 4–5 years was observed. There was no family history of hemostasis disorders.

Previously treated with various antimigraine prophylactics, including antihypertensive drugs such as candesartan, lisinopril, metoprolol, anticonvulsants such as topiramate, lamotrigine as well as botulinum toxin type A, funarizine, ribofavin, and magnesium without effective reduction in migraine days.

After 3 month followup there was a significant reduction in headache and migraine (50%). Mild constipation was reported by the subject and increased tendency to bruise. Bruising occurred on her lower legs and thighs and upper arms. No bruising was observed in the injection site. No fever or general aches observed. Platelet count and aggregation, thromboelastography, APTT and INR was normal.



Ecchymoses on the patient's upper left thigh

Erenumab was lowered to a dose of 70 mg. After 5 weeks the subject presented with extreme aggravation of the bruising tendency as she woke up with a 16 cm×8 cm ecchymosis on each thigh.

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She was interviewed on the use of her medications. Subject denied trauma, local pain, itching etc. It was revealed that, a daily use of fish oil supplements for many years which the patient did not regard as medication. Fish oil was suspected of having an interaction with erenumab causing hemostatic disturbances. She was advised to stop the use of fish oil supplements.

She was referred to Dermatologists for skin biopsy if no improvement was observed after cessation of the fish oil. No other clinical symptoms of a potential autoimmune vasculitis was observed in the subject. Tendency to bruise was improved after 6-months. Erenumab dose was increased from 70 to 140 mg because of better efficacy of 140 mg in the first 3 months. After 9 and 12 months there was no increased tendency to bruise and the subject continued to have satisfactory effect of 140 mg erenumab every 4 weeks.

Conclusion:

Combination of fish oil supplements and erenumab may cause increased tendency to bruise. Caution is advised when prescribing erenumab to subjects with a tendency to bruise easily, who have pre-existing coagulopathies or are receiving blood thinners such as fish oil, platelet inhibitors or anticoagulants due to a possible increased risk of severe bruising.

Reference:

Cullum CK, Olsen MK, Kocadag HB, Ashina M, Amin FM. Extreme ecchymoses in a migraine patient using concomitant treatment with calcitonin gene-related peptide receptor antibodies and fish oil supplements: a case report. BMC neurology. 2021 July;21(1):1-4.



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