

Trigeminal neuralgia: an unusual case associated with CPA arachnoid cyst

Thaer hammed muhsan

Sattar rasheed

Az-Zahraa general hospital,kut,wasset

الم العصب الخامس: حالة غير اعتيادية ارتبطت بوجود كيس في منطقة (س ب أ) العنكبوتي

ثائر حميد محسن ستار رشيد سباح
مستشفى الزهراء العام / الكوت ، واسط

الخلاصة

حالة إصابة بألم العصب الخامس لفتاة عمرها ٢٨ سنة إعراضها ألم لاذع ومتقطع ولا يشفى باستعمال علاج التكريتول سببه كيس عنكبوتي في منطقة زاوية المخيخ الجسري مما يسبب ضغطا على عقدة العصب الخامس في هذه الحالة سوف نناقش الام الصب الخامس وطرق علاجه بصورة عامة وهذه الحالة بصورة خاصة

Summery

A case of trigeminal neuralgia in a 28 year old female, complaining from severe lancinating intermittent pain, not relived by tegretol, caused by CPA arachnoids cyst which causes pressure on trigeminal ganglia in the pons, In this paper we discuss the trigeminal neuralgia and its treatment in general and specially this case

Introduction

Trigeminal neuralgia(TN)or Tic Doloureux or prosopalgia is a neuropathic disorder of the trigeminal N that causes episodes of intense pain in the eye,lip,nose, head&jaw(1) TN usually develop after the age of 50 years , more commonly seen in female ,although were reported cases in patients as young as there years of age(2).

The pathogenesis

The pathogenesis of trigeminal neuralgia is uncertain. The disorder typically is idiopathic but may be due to a structural lesion(3).The presumed cause of TN is compression on the Trigeminal N as it exits the brainstem by tumor , cyst , blood vessels or bone .This compression causes the wearing away of the protective coating around the N(myelin sheath) .TN may be part of the normal aging process as blood vessels lengthen they can come to rest &pulsate against a n ,this deterioration of myelin causes the nerve to send abnormal signals to the brain (4),Trigeminal neuralgia symptoms are sudden ,severe ,painfull,stabing or electrical like shock in the face(5).

Diagnosis

There is no single test for diagnosis of TN .Diagnosis is generally based on the patients medical history. Physical exam and through neurological examination are done by a physician(6).

Because similar symptom can occur due to tumor ,arteriovenouse malformation or multiple sclerosis, An MRI scan with and without an injected contrast dye is essential to diagnosis TN(5)

Treatment

Treatment options include:

Medicines, surgery and complementary approaches(4)

Anticonvulsant medicine:

1- tegretole(carbamazepine) typically is used as the drug of choice ,Complete or acceptable relief occur in69%, (if 600-800 mg are tolerated)If no relief, diagnosis of trigeminal N is questioned or suspicious.

2-Baclofen (Lioresal)is not as effective as carbamazepine ,but it has fewer side effect; it may be more effective if used in conjunction with low dose carbamazaepine(4).

3-Gabapentin(Neurontine)is an anticonvulsant that may act synergistically with carbamazepine & baclofen; side effect include ataxia,sedation&rash.The treatment starts with 100mg at bed time ,titrate to 5-7mg per kg daily(4).

4-Miscellaneous drugs: capsaicin,clonazepam,Lamotrigine

Other treatment neurosurgical procedure for severe cases:

severing the trigeminal n roots)(7) Neurectomy(*

-V1 at supraorbital,supratrochlear and infra orbital

-V2 at foramen rotundam

-V3 block at foramen ovale

*Microsurgical decompression of the trigeminal n found to be impinged on by blood vessel or bone protuberance (8).

*Complete section of the nerve proximal to the ganglia.

*ARhizotomy:is procedure in which selective nerve fibers are destroyed to relieve pain ..Arhizotomy for TN causes some degree of permanent sensory loss and facial numbness: several form of rhizotomy are available to treat TN as:

a-balloon compression

b-local block (phenol ,alcohol)

c-glycerol injection into meckels cave possible lower sensory loss and anesthesia dolorosa than with radiofrequency lesion

c-Radiofrequency thermal lesioning(thermaocoagulation)

d-steretotactic radio surgery(4)

Case report

A 28 year old single female , attended to the Maxillofacial Department in Az-Zahraa General Hospital ,Kut ,Iraq ,complaining from right facial pain. The pain was intermittent with attack of sudden lancinating (like electric shock) with devastating intensity lasting only few seconds .Some time the complain was coming in attacks of multiple severe pain one after the other&sometims the plain was continuous and experienced in both maxillary &mandibular divisions .The painful attack is unilateral and is at right nasolabial tender area, induced by eating,speaking&cold weather, not relived by drugs; The pain does not interfere with her job, and is not associated with vomiting

The patient has no history of hyper tension or diabetes mellitus no history of smoking , no alcohol consumption no trauma, no familial history ,no history of visual disturbances , and no history of face surgery .The consultation was done with neurosurgeon ,during clinical examination and its found that the patient looks tense and anxious.

Neurological examination of the cranial n found no sensory loss at the trigeminal distribution ,the motor and sensory examinations are normal ,the pulse 70/beat per min ;blood pressure 110-70 ;medical examination is normal ;no menaingeal or cerebellar sign

MRI brain show well defined 4x5 cm homogenous CSF signal (high T2,lowT1 and it disappeared on flair)

The cyst occupying left cerebello-pontine angle& extending to midline and into qudrigeminal cistern displacing brainstem(both mid brain&pons) forward and to the right side and cerebellum downward, compressing 4th the ventricle causing mild triventricular(3rd&both lateral) hydrocephalus& showing no significant perifocal oedema or contrast enhancement ;picture goes with CPA archenoid cyst with pressure effect on adjacent structure including origin and ganglia of left trigeminal N brainstem looks slightly compressed and displaced but no abnormal signal intensity is seen.

Discussion

Any case of TN which lacks the typical feature of idiopathic case must be imaged like:

1-Young age groups

2-Abnormal finding in the trigeminal nerve examination like sensory defecate

3-long lasting episodes of pain ,and associated other cranial nerve palsied in the CPA like the 8th,7th,and 10th cranial nerve

4-TN not responding to the usual medical treatment and associated with any abnormal neurological findings in the examination

Conclusion

-The age distribution of TN is usually in older individual between 5th- 6th decade of life .in our case the patient is young in the second decade of life with TN due to CPA archenoid cyst which is an unusual case.

-Any young patient with TN must do CT or MRI of the brain to exclude compression of the 5th cranial n by tumor or cyst.

This patient was treated by tegretol 200mgx3 daily plus lamotrigin once daily and the pain is not relieved and uncontrolled .In addition, the patient refuse the other method of treatment like neurosurgical or rhizotomy.

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