

AYURVEDA A BOON FOR SINUSITIS WITH EEG ABNORMALITY**Minal S Vaidya**

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ABSTRACT

Sinusitis, also known as a sinus infection or Rhinosinusitis, is inflammation of the sinuses resulting in symptoms like facial pain, clogged nose, headache, fever etc... In rare case, infection may spread to brain causing Abscesses, meningitis, and other life-threatening conditions. In such cases, the patient may experience mild personality changes, headache, altered consciousness, visual problems, and, finally, seizures, coma, and death. To assess function of brain EEG is the modality of choice. Electroencephalography (EEG) is typically a non-invasive (however invasive electrodes are often used in specific applications) method to record electrical activity of the brain. EEG is most often used to diagnose epilepsy, which causes abnormalities in EEG readings. It is also used to diagnose sleep disorders, coma, encephalopathies, and brain death.

Method: In current study, a female patient of 54 years having signs and symptoms of Sinusitis was included. Her EEG revealed – ‘mildly abnormal EEG with right temporal abnormality’. CT scan was done to rule out SOL causes for headache but it did not reveal any such cause. This patient was given Nasya, Shirodhara and oral medicines for 21 days. **Result:** There was improvement in cardinal signs and symptoms of Sinusitis and EEG done after treatment was absolutely normal. **Conclusion:** This line of treatment provided good clinical relief and also proved a promising remedy for EEG abnormalities.

Key words: Electroencephalography (EEG), Nasya, Oral medicines, Shirodhara, Sinusitis,

INTRODUCTION

Sinusitis affects a tremendous proportion of the population, accounts for millions of visits to primary care physicians each year, and is the fifth leading diagnosis for which antibiotics are prescribed. [2]

Rhino-sinusitis refers to an inflammatory condition involving the four paired structures surrounding the nasal cavities. Although most cases of sinusitis involve more than one sinus, the maxillary sinus is most commonly involved; next, in order of frequency, are the ethmoid, frontal, and sphenoid sinuses. Each sinus is lined with a

respiratory epithelium that produces mucus, which is transported out by ciliary action through the sinus ostium and into the nasal cavity. Normally, mucus does not accumulate in the sinuses, which remain mostly sterile despite their adjacency to the bacterium-filled nasal passages. When the sinus ostia are obstructed, however, or when ciliary clearance is impaired or absent, the secretions can be retained, producing the typical signs and symptoms of sinusitis. As these secretions accumulate with obstruction, they become more susceptible

to infection with a variety of pathogens, including viruses, bacteria, and fungi. [2] Sinusitis is typically classified by duration of illness i.e. acute vs. chronic; by etiology i.e. infectious vs. noninfectious and infectious sinusitis is further classified as viral, bacterial, fungal. [2] Commonly presenting symptoms of sinusitis include nasal drainage and congestion, facial pain or pressure, and headache. Thick, purulent or discolored nasal discharge is often thought to indicate bacterial sinusitis but also occurs early in viral infections such as the common cold and is not specific to bacterial infection. Other nonspecific manifestations include cough, sneezing, and fever. Tooth pain, most often involving the upper molars, as well as halitosis can be associated with bacterial sinusitis. [2] Acute or Chronic sinusitis may lead to intracranial complications. Most common complication in paranasal sinusitis is orbital cellulitis, followed by intracranial complications like Meningitis, Sub-dural empyema, intra-cerebral abscess, epidural abscess, Osteomyelitis. [3] Diagnosis of Sinusitis can be done clinically as well as on the basis of X-ray PNS- W/C view or CT of sinuses. Choice of treatment in this disease is Antibiotic, Antiviral, Antifungal medicines. In case of suspected intracranial complications CT scan, MRI, EEG, Cerebro-spinal fluid analysis should be done.

CASE REPORT

A female patient of age 54 years presented with complaint of continuous headache, sneezing, and running nose on and off, heaviness in head. These symptoms developed within three weeks. There was no history of any major illness like Diabetes

Mellitus, Hypertension etc... No history of trauma, surgery, allergy and addiction was found.

Clinical Examination

Dashvidha Pariksha

- Prakruti : Vata Pittaja
- Vikruti : Vataja kaphaja
- Sara: Madhyam
- Samhanana : Madhyam
- Ahara Shakti : Abhyavaharana Shakti: Avara
Jarana Shakti: Avara
- Vyayam Shakti : Avara
- Vaya : Madhyam
- Satva : Madhyam
- Satmya: Sarva Rasa
- Bala : Madhyam

Ashtavidha Pariksha

- Nadi : Vata Kapha (70/min)
- Mala: Avishesh
- Mutra: Avishesh
- Jivha : Alpa Saam
- Shabda: Spashta
- Sparsha : Anushna sheeta
- Druk : Avishesh
- Akruti: Madhyam

General Physical Examination

- B.P.=130/90mmHg, Pulse rate = 70/min, Pallor -ve, Icterus-ve, Cyanosis-ve, Clubbing-ve, Oedema: ve.
- CVS: S1S2 Normal
- Chest: B/L equal air entry with no added sound
- CNS: Conscious, Oriented.

Investigations before Treatment

- X-ray PNS : W/C view
Maxillary, Frontal sinuses hazy s/o Sinusitis

- EEG – Mildly abnormal EEG with right temporal abnormality

Treatment

- **Nasya**
Nasya with Anu-tailam (4 drops in each nostril) was given for first 7 days followed by Brahmi Ghruta (6 drops in each nostril) for 14 days.
- **Shirodhara**
Shirodhara was done with Ksheera-bala tailam after nasya for 21 days.
- **Oral Medicines**
Naradiya Laxmivilas Rasa Vati: 2 tablets (each 125mg) Thrice a Day

Tribhuvankirti Rasa Vati: 2 tablets (each 125mg) Twice a Day 1 month

Sitopaladi Churna: 1 tsp i.e. 5gms with honey Thrice a Day

Investigations after Treatment (after 1 month)

- X-ray PNS : W/C view
Normal bone structure.
No evidence of fluid in the sinuses.
No thickening of the mucous membrane.
- EEG : A normal awake EEG record

BRAIN CENTRE
206, Shiv Center, Sec 17, Vashi, Navi Mumbai- 400 703

PATIENT INFORMATION

Date: 02-Apr-2015
ID : 211
Name : Mrs. Seema Sunchu
Age : 54 yrs (F)
Address : belapur
Handedness : Right
Medication :
Last Attack : last attack 1/03/2015
Refd. By : Dr Pawan Ojha
Record Type : Awake

NOTES

occ giddiness, numbness in head, migraine

Heading

EEG Obtained with 10-20 system of electrode application.
Patient was awake during the recording
Background activity consists of 9-10Hz alpha activity over occipital regions
12-13 Hz beta activity was seen over frontal regions
There were a few right temporal sharp waves.
Activation procedures were uneventful.

Conclusion

Impression: This is a mildly abnormal EEG with right temporal abnormality. Please correlate clinically.

MGM'S HOSPITAL, KAMOTHE
SECTOR-18, KAMOTHE, NAVI MUMBAI

DATE: 30-May-2018
ID : 949
Name : Mrs. Seema Saichu
Age : 55 yrs (F)
Address :
Medication :
Last Attack :
Refd. By : Dr. Benny
Technician : Mr. AMOL
Record Type : Awake

PATIENT INFORMATION

NOTES

EEG was obtained using the 10-20 system of electrode application.
Patient was awake during the recording.
Background activity consists of alpha waves at 9-10 Hz posteriorly and low voltage fast frequency beta waves anteriorly.
There is no evidence of focal or generalised epileptiform activity seen.
Activation procedures are uneventful.

IMPRESSION:

THIS IS A NORMAL AWAKE EEG RECORD.

Please correlate clinically.

RESULT

There was significant improvement found in the signs and symptoms of patient within seven days of commencement of treatment. Headache, heaviness in head was entirely reduced in 15 days. X ray and EEG also revealed normal findings after one month of treatment. There was no side effect observed during the treatment as well as after the completion of treatment.

DISCUSSION

Sinusitis can be correlated with Ayurvedokta Peenasa. It is Vata-Kapha

dominant disease. There is avarodhatmak (obstructive) samprapti in the disease. Hence, basic treatment is directed towards shodhana of Pranavaha Strotasa.

Nasya

For first 7 days Nasya was given with *Anu taila*. Its ingredients are *Holostemma ada-kodien*, *Plectranthus vetiveroides*, *Cedrus deodara*, *Cyperus rotundus*, *Cinnamomum zeylanicum*, *Vetiveria zizanioides*, *Hemidesmus indicus*, *Glycyrrhiza glabra*, *Cyperus esculentus*, *Aegle marmelos*. *Solanum anguivi*.

Desmodium gangeticum. Pseudarthria viscida. Embelia ribes. Asparagus racemosus, Kaempferia rotundus, Cinnamomum tamala, Elettaria cardamomum, Piper aurantiacum, Nelumbo Nucifera, Oil of Sesamum indicum, Goat's milk.

Anu Tail Nasya is specially recommended by *Charakacharya* as preventive measures for *Urdhva Jatrugata Vikara* (diseases which occurs above the Neck region) & also for the management of *Peenasa*. *Anu Tail* has *Tridosha -nashana, balya, bruhana* and *Rasayana* properties which may help to increase local immunity. Possess *Laghu & Vyavayi* properties hence it spreads into minute channels and clears obstruction in *Pranavaha Strotasa*.^[4]

For next 14 days nasya was given with Brahmi Ghruta. After Vighatan of avarodhatmak samprapti with Anu tail, for regulation of vitiated Vata Ghruta Nasya was given. It contains Cow ghee, *Brahmi (Bacoppa monniera)*, *Vacha (Acorus calamus)*, *Kushtha (Saussurea lappa)*, *Mundi (Sphaeranthus indicus Linn.)*, *Neelkamal (Nymphaea stellata)*, *Saindhav*. Among them three i.e. Brahmi, Vacha, Ghruta are reported for psychological disorders and other four ingredients i.e. Kushtha, Mundi, Vacha, Neelkamal, Saindhav for somatic disorders and one i.e. Pippali act as bio enhancer, Thus this formulation shows balanced ingredients for somatic as well as psychological disorders. Hence, it is indicated for Sarva-Roga (somatic as well as psychological disorders)^[5]

Shirodhara

Previous research shows that warm oil during Shirodhara falls on the Aadnya Chakra, the point of forehead considered in Ayurveda to have the highest concentration of nerves in the body. It relieves tension, dispels worry, reduces anxiety, calms fear, renews the nervous system and relieves chronic headaches.^[6]

Ksheera bala tail reduces the oxidative stress when administered together by affecting the membrane fluidity and architecture of the brain.^[7]

Oral Medicines

- ***Naradiya Laxmivilas Rasa***: According to classical texts it is indicated in *Peenasa*. Because of its contents it dries the excessive secretions in sinuses and nasal cavity. It contains *Abhrak Bhasma* (calcined mica ash), *Shuddh Parad* (purified mercury), *Shuddh Gandhak* (purified sulphur), *Karpoor (Dryobalanops aromatica)*, *Jatiphala (Myristica fragrans)*, *Jatipatra (Jasminum grandiflorum Linn.)*, *Vridhdharu (Argyrea nervosa)*, *Dhaturoo beej (Datura stramonium)*, *Vijaya beej (Cannabis sativa)*, *Vidari kand (Pueraria tuberosa)*, *Shatawari (Asparagus racemosus)*, *Nagabala (Grewia hirsuta)*, *Bala (Sida cordifolia)*, *Gokshura (Tribulus terrestris)*, *Hijjal beej (Barringtonia acutangula)*.
- ***Tribhuvankirti Rasa***: This is indicated in *Vata-Kaphaj* diseases like Cold, cough, coryza, Bronchitis, tonsillitis, sinusitis etc...It contains *Shuddha Hingula* (Purified Cinnabar), *Shuddha Vatsanabha* (Purified *Aconitum ferox*), *Shunti (Zingiber officinalis)*, *Maricha (Piper nigrum)*, *Pippali (Piper longum)*,

Tankana Bhasma (Borax), *Pippalimoola* (*Piper longum*), Juice extract of *Tulasi* (*Ocimum sanctum*), Juice extract of *Dhattura* (*Datura metel*), Juice extract of *Nirgundi* (*Vitex negundo*).

- **Sitopaladi Churna:** It helps in breaking down the mucus accumulated in infected sinuses. It contains *Sharkara* (Sugar), *Vanshlochana* (*Tabasheer*), *Pippali* (*Piper longum*), *Ela* (*Elettaria cardamomum*), *Twak* (*Cinnamomum zeylanicum*). It is beneficial to cure cold related problems-cough, sneezing, seasonal allergies. It Supports Respiratory health, digestive system as well.

EEG Changes

EEG assesses function of brain. Brain means 'Shiras'. Vata and Kapha Dosha regulate functions in Shiras region. Peenasa is Vata-Kapha dominant disease. There is avarodhatmak (obstructive) samprapti in the disease. Hence, when Vata and Kapha gets vitiated, function of brain is disturbed which is reflected in EEG as abnormal waves. As stated in the above discussion, treatment given in this case played role in regularizing Vata and Kapha dosha. Hence, as a result of corrected brain function EEG revealed normal waves after treatment.

Hence, basic treatment is directed towards shodhana of Pranavaha Strotasa.

CONCLUSION

With this line of treatment Sinusitis or Peenasa got cured as avarodh due to Dushta Kapha got cleared and Gati of Prana and Udana Vayu got regulated. Sinusitis might have caused some intracranial complication, as a result of which EEG showed abnormal

activity. Nasya and Shirodhara played role in bringing back the abnormal brain function to normal.

On this basis clinical trial can be undertaken with a large population to standardize this treatment as cure for sinusitis and its intracranial complications.

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Source of support: Nil
Conflict of interest: None Declared