



ORIGINAL RESEARCH PAPER

Internal Medicine

A CASE REPORT ON ORAL CONTRACEPTIVE PILL INDUCED CEREBRAL VENOUS SINUS THROMBOSIS IN A YOUNG FEMALE IN A TERTIARY CARE HOSPITAL

KEY WORDS:

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INTRODUCTION:

Cerebrovascular Accidents Are The One Of The Most Common Causes Of Morbidity And Mortality Around The World. They Can Be Classified Into Ischemic Or Hemorrhagic In Origin. Amongst Ischemic Events, Arterial Infarctions Are More Prevalent. The Incidence Of Cerebral Venous Thrombosis Is A Relatively Uncommon Entity With An Estimated Incidence Of <2.5/100000 Adults Annually.

Cerebral Venous Thrombosis Has Higher Prevalence In Females Than Males With An Average Age Of Onset At 39 Years.

Major Risk Factors Are Prothrombotic States Such As :

- Infections
- Oral Contraception
- Malignancy
- Obesity
- Head Injury
- Autoimmune Disorders

Clinical Presentation Of Such Patients Can Be Highly Variable, Ranging From Mild Symptoms Such As Headache To Life Threatening Coma.

Headache Is The Most Common Symptom Which Could Be Associated With Signs Of Raised Intracranial Tension Such As Vomiting And Raised Blood Pressure. Patients Could Also Have Visual Symptoms Such As Blurring Of Vision Or Blindness. In Rare Cases Patients May Even Develop Focal Neurological Deficits, Seizures, Altered Sensorium Or Coma.

Cerebral Venous Sinus Thrombosis Can Be Life Threatening And Hence Should Be Diagnosed And Treated At The Soonest.

Case History And Clinical Course:

A 32 Year Old Female Presented To The Er Of A Tertiary Care Hospital With % Diffuse Headache Since 4 Days Which Was Gradually Increasing In Nature And Was Not Relieved By Pain Killers.

Headache was Associated With Giddiness And Generalised Weakness.

Patient Also Had Complain Of Vomiting, Single Episode, Projectile Not Containing Blood/bilious Matter Patient Had No Complains Of Fever, Altered Sensorium, Photophobia, Phonophobia, Loss Of Consciousness Or Involuntary Movements

Patient Has Had 4 Pregnancis Of Which 3 Children Were Delievred By Normal Vaginal Delivery And Patient Had One Abortion.

Patient Has Been On Oral Contraceptive Pills For Dysmenorrhoea Since Last 3 Months.

Patients Last Menstrual Cycle Was 2 Weeks Prior To Admission.

Vitals On Admission

T-n
 P- 84/min
 Spo2- 98 On Ra
 Bp- 140/80mmhg
 Rr- 16/min
 Cvs- s1s2+
 Rs- clear
 Cns- conscious/oriented/following Verbal Command
 Tone- N/n
 Power- -4|-4
 -4|-4
 Plantar- b/1 Flexor
 Dtr- +2 Except B/1 Biceps, Triceps +3

No Nystagmus

No Dysdiadochokiensis
 Rhomberts Test - Positive
 Tandem Walk Test - Swaying On Either Side Broad Based Gait
 No Sensory Involvement

After Admission, Patient Routine Laboratory And Radiological Investigations Were Done.

Mri Brain Venogram Contrast Was Performed Which Was Suggestive Of : Contrast Filling Defect Noted In Superior Sagittal Sinus For A Segment Of 3 Cm In High Parietal Region And Adjacent Bilateral Superficial Cortical Veins, Both Internal Cerebral Veins, Great Cerebral Vein Of Galen, Straight Sinus, Sigmoid Sinus And In Torcular Herophili Extending Into Right Transverse Sinus. It Appears Iso-hyperintense On T1wi And Hypointense On T2wi, Suggestive Of Acute Venous Sinus Thrombosis.

Left Transverse And Sigmoid Sinuses Appear Narrow In Caliber, However Appear Patent.

Cerebral Veins:

No Evidence Of Any Obvious Thrombosis Noted In The Basal Vein Of Rosenthal.

- Few Scattered Acute Lacunar Infarcts In Bilateral Centrum Semiovale And Corona Radiata.
- Acute Infarct In Cortex And Subcortical Matter Involving Right Parietal Lobe, Right Basal Ganglia And Bilateral Thalamus.
- Area Of Gliosis Left Occipital Lobe Causing Ex Vacuo Dilatation Of Occipital Horn Of Left Lateral Ventricle.
- Acute Venous Sinus Thrombosis Of Superior Sagittal Sinus And Adjacent Bilateral Superficial Cortical Veins, Both Internal Cerebral Veins, Great Cerebral Vein Of Galen, Straight Sinus, Sigmoid Sinus And In Torcular Herophili Extending Into Right Transverse Sinus.

Patient Was Extensively Investigated For Thrombophilia
 Patient Tested Negative For:
 Hyper Homocystenemia
 Anti Nuclear Anti Body
 Anti Phospholipid Anti Body
 Factor V Leiden Mutation
 Protein C Deficiency
 Protein S Deficiency
 Anti Thrombin 3 Deficiency

Patient's Fundus Examination Was Done Which Revealed No Significant Abnormality.

Patient Was On Ethinyl Estradiol And Drospirenone Oral Contraceptive Pills Which Were Stopped On Admission.

The Patient Was Treated With Heparin , Anticonvulsants And Mannitol. Warfarin Was Started After Overlapping With Heparin For 5 Days. Patient's Pt Inr Was Closely Monitored.

Patient Improved Symptomatically And Was Subsequently Discharged On Oral Anticoagulants And Glycerol.

Diagnosis And Discussion:

Clinical Features Suggestive Of Cerebral Venous Sinus Thrombosis Must Prompt Urgent Neuro Imaging Which Could Reveal Parenchymal Lesions, Cerebral Edema, Venous Infarction Or Hemorrhagic Transformation.

Head Ct May Be Normal In Upto 30 % Of Cvt Cases. But 1/3rd Of Patients Could Reveal Cord Sign, Dense Triangle Signs Or The Empty Delta Sign.

Ct Venography May Reveal Filling Defects, Sinus Wall Enhancement And Increased Collateral Drainage.

However, Mri Brain With Venogram Is The Most Informative Technique. It Could Reveal The Extent Of Brain Parenchymal Damage, Presence Of Dural Thrombosis Or Cortical Vein Thrombus.

Coagulation Profile Is Essential To Rule Out And Thrombotic States.

D-dimer May Be Used As A Screening Tool As An Elevated D-dimer Is An Indicator Of Endothelial Injury.

Tests To Rule Out Thrombophilic States Are Necessary To Identify The Possible Etiology Of Venous Sinus Thrombosis.

Having Excluded Most Other Causes Of Thrombophilia In This Patient, Development Of Venous Sinus Thrombosis Was Attributed To Oral Contraceptive Pills.

Increased Risk Of Venous Thrombosis Is A Well Known Complication Of Oral Contraceptive Pill Use.

CONCLUSION :

Venous Sinus Thrombosis Is A Rare Life Threatening Entity. Prompt Diagnosis And Initiation Of Treatment Is Mandatory In Order To Improve The Prognosis Of The Patient. Complications Of Venous Sinus Thrombosis Could Have Long Term Complications Due To Raised Ict, Brain Parenchymal Damage And Multiple Other Pathways.

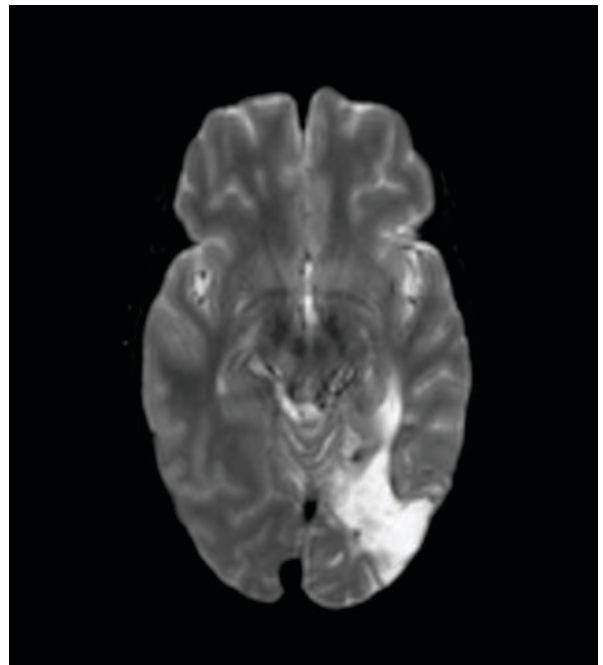
The Risk Of Developing Venous Thrombosis After The Use Of Oral Contraceptive Pills Is Not Negligible And Warrants Strict Monitoring And Counseling To The Patient.

The Development Of Venous Sinus Thrombosis In This Patient Was Attributed To Oc Pill Use After Ruling Out Other Possible Causes Of Thrombophilia.

Patient Was Prescribed On Oral Anticoagulant Therapy And

Was Advised To Continue It For 12 Months.

Images:



REFERENCES :

1. <https://www.ncbi.nlm.nih.gov/books/NBK560598/>
2. <https://www.ahajournals.org/doi/10.1161/str.0b013e31820a8364>
3. <https://pmj.bmj.com/content/76/891/12>
4. <https://obstetrics.imedpub.com/oral-contraceptive-pills-induced-vein-of-labbe-thrombosis.pdf>
5. [https://www.jogc.com/article/S1701-2163\(16\)34454-1/pdf](https://www.jogc.com/article/S1701-2163(16)34454-1/pdf)