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Posterior Reversible Encephalopathy Syndrome Presenting As Complete Blindness In Obstetrics.

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ABSTRACT

Pres Is A Vasogenic Mediated Syndrome Which In Obstetrics Is Usually Secondary To Sudden Rise In Blood Pressure. Here We Present To You A Case Of Severe Pih With Blindness Which Was Managed Accurately And Thereby Maternal Morbidity And Mortality Was Prevented.

Keywords: Reversible Posterior Leukoencephalopathy Syndrome, Reversible Posterior Cerebral Edema Syndrome, Reversible Occipito Parietal Encephalopathy Syndrome

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INTRODUCTION

Pres Refers To Vasogenic Mediated Phenomenon With Characteristic Neurological And Imaging Findings Due To Rapid Increase In Blood Pressure Exceeding The Autoregulatory Capacity Of The Brain Vasculature. It Is A Clinico Neuro Radiological Syndrome Characterised By Headache, Altered Mental Status, Visual Disturbances And Seizures Associated With Images Suggesting White And Gray Matter Edema In Most Cases In The Posterior Region Of Cns It Was First Described In 1996 By Hinchey Et Al. The Typical Features Of Pres Consist Of Consciousness Impairment(13-90%), Seizure Activity(92%), Headaches, Visual Abnormalities(26-67%) In Which Cortical Blindness Accounts For 8-12%, Nausea/Vomiting(26-53%), Permanent Neurological Abnormalities Is Rare(7%), Recurrence Rate-6%

Case Report

Mrs X, 25 Year Old , G4p3l3, With Previous All Three Normal Deliveries Presented At 32 Weeks Of Gestation To Our Labour Room With Complaints Of Complete Blindness Since Afternoon. The Previous Day She Had Severe Headache Which Persisted For One Whole Day And The Next Day Morning She Developed Blurring Of Vision And She Eventually Became Blind.

The Patient Had No Regular Antenatal Check Ups. She Had No Similar History In The Previous Pregnancies. She Is Not A Known Case Of Hypertension, Diabetes, Or Chronic Renal Disorder.

On Examination- Her Blood Pressure Was- 200/150 Mm Of Hg, Pulse- 90beats/Min, Bilateral Pitting Kind Of Pedal Edema Was Present.

Ophthalmological Fundus Examination- Could Not Be Done

The Patient Is Shifted For Mri-

T2 Weighted Images Showing Diffuse Hyperintensities In Occipitoparietal Region

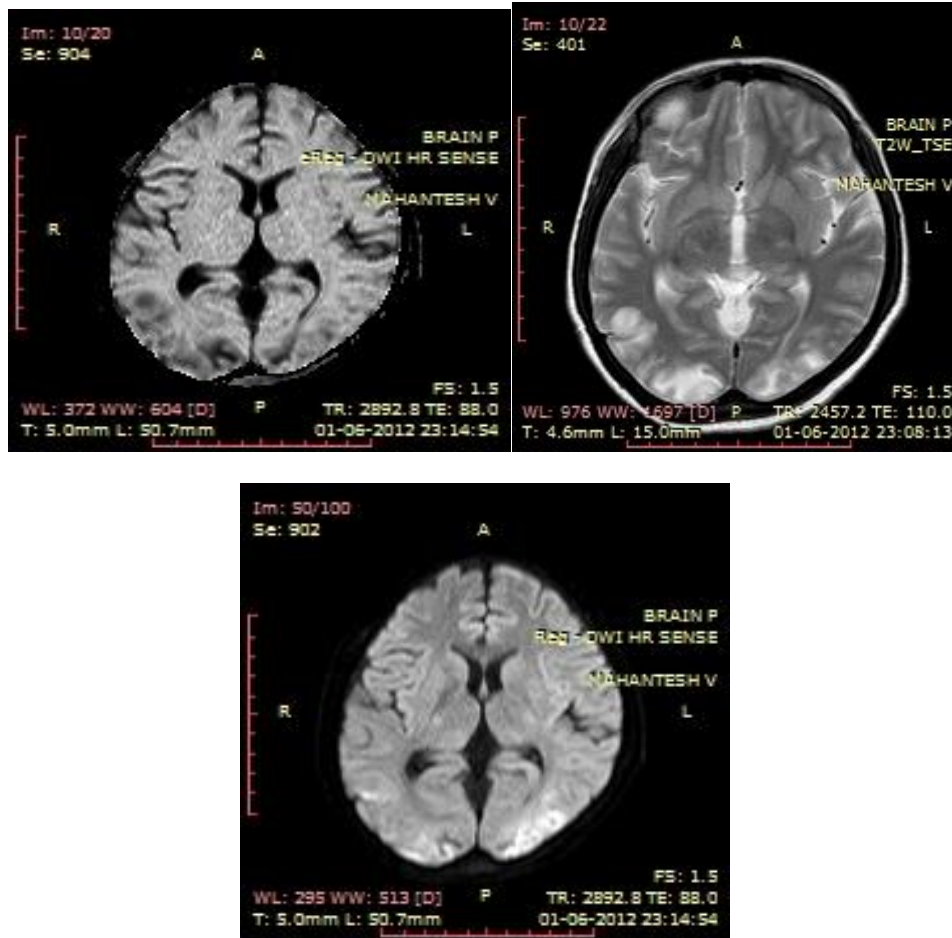
Flair- Diffuse Symmetrical Cortical And Subcortical Hyperintensities In The Occipito Parietal Region

Diffusion Weighted Images- Normal (No Restriction)

May Show Hyperintensities- T2 Shine Through Images, Infarction Or Haemorrhage

Adc Mapping- Markedly Bright Areas (Vasogenic edema)





The Imaging Findings Was Consistent With The Diagnosis Of Pres

All Basic Investigations Were Done Including Pih Profile- Urine Albumin- 3+, Uric Acid Levels- 7mg/Dl, Lft – Normal, Urea And Creatinine Is Normal

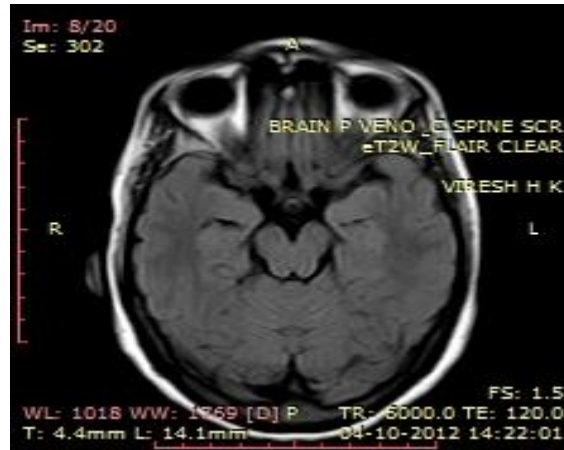
Prompt Treatment Was Started For Severe Htn- Antihypertensives(Calcium Channel Blocker), Mannitol, Magnesium Sulphate (Pritchard Regimen) Is Started And Induction Of Labour Was Done.

The Patient Delivered Vaginally A Male Baby Of 1.7 Kgs, Baby Cried Immediately After Birth After 13 Hours Of Induction Of Labour.

Complete Reversal Of Loss Of Vision Was There 20 Hours Post Delivery. Being Completely Blind She Started Having Betterment Of Vision Within 5 Hours Of Good Control Of Blood Pressure.

The Patient Is Discharged On 15th Post Natal Day- With Tab. Nicardia Retard 10 Mg B.D, And Counselling For Regular Blood Pressure Monitoring.

The Mri On The 9 Th Day Showed Complete Resolution Of The Imaging Signs



DISCUSSION

The Pathophysiology Of Pres Remains Controversial. The Two Main Hypotheses Contradict Each Other. One Involves Impaired Cerebral Autoregulation Responsible For An Increase In Cerebral Blood Flow (Cbf), Whereas The Other Involves Endothelial Dysfunction With Cerebral Hypoperfusion.

This Hypoperfusion Hypothesis May Be Most Relevant To Cases Of Pres Associated With Cytotoxic Therapy(Cyclosporine, Tacrolimus).

Under Both Hypotheses - There Is Failure Of The Autoregulation(Mean Arterial Blood Pressure- 60-120 Mmof Hg) Of The Cerebral Blood Flow Mainly Involving The Occipitoparietal Region Leading To Endothelial Injury And Vasogenic Edema Due To Abrupt Increase In Blood Pressure.

There Is Failure Of The Blood Brain Barrier To Maintain The Compartmentalisation Of The Intravascular Fluid. Therefore There Is Leak Of Intravascular Fluid Between The Cells Causing Vasogenic Edema.

Predisposition For Edema To Occur In The Posterior Cns Areas, Particularly In The Occipitoparietal Areas Is Thought To Be Secondary To The Partial Lack Of Sympathetic Innervation Of The Vasculature That Emerges From The Basilar Artery

Chronic Htn Is A Relative *Protective* Factor In The Development Of Pres Because In Response To Sustained High Bp, The Walls Of Large And Small Cerebral Vessels Become Hypertrophic, This Results In A Reduction Of The Wall Stress Providing Bbb Protective Effects. This Compensatory Response Is Not Present In Pregnancy-Induced Htn.

Management-

Control Of Hypertension Is The Main Part Of Management. Rapid Decrease In Blood Pressure Is Not Recommended Instead A Decrease In A Map By 20- 25% In First 2 Hours And Then Bring Down The Blood Pressure To 160/100 In Next 6 Hours. The Triggering Factor Has To Be Identified To Prevent Irreversibility.

CONCLUSION

Immediate Recognition And Treatment Of This Catastrophic Disorder Is Important To Avoid Unnecessary Interventions And When Not Promptly Treated The Patient Is Prone To Become A Chronic Epileptic. It Is A Benign Condition Where There Is Complete Reversal Of All Symptoms On Immediate Treatment - Which While Explaining To The Patient Relatives About The Prognosis Is Very Important.The Certain Identification Of This Syndrome Is Achieved With Head Mri Specifically With Dwi.

The Treatment Of Pres, As A Secondary Pathology, Depends Upon The Determination Of The Underlying Contributing Condition; However, Palliative Therapy For Symptoms That Might Worsen The Outcome (E.G.Seizures) Must Be Provided, As Well As Strictly Monitored Bp. Delayed Diagnosis And Therapy Can Result In Ischemic Injury And Irreversible Changes [1-6].

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