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Tranexamic Acid Induced Headache and Back Pain

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ABSTRACT

Back pain and Headache are symptoms rather than a disease condition, there are many causes of back pain, including blood vessels, internal organs, infections, mechanical, and autoimmune causes. The spinal cord, nerve roots, vertebral column, and muscles around the spine can all be sources of back pain. A headache can be a sign of stress or emotional distress, or it can result from a medical disorder, such as migraine or high blood pressure, anxiety, or depression. A wide variety of medicines, including birth control pills, heart drugs, and even pain relief medications, can cause headaches. Tranexamic acid (TXA) is a synthetic lysine derivative that acts as an antifibrinolytic drug by inhibiting plasminogen activation and preventing fibrin degradation. TXA is therefore commonly used to reduce perioperative blood loss, particularly during cardiac and orthopedic surgery. We are reporting a case of 36 yrs female patient with the chief complaints of Pain in the lower abdomen, Increased frequency of micturition, bleeding per vagina, urinary incontinence. She was diagnosed as ABNORMAL UTERINE BLEEDING WITH ADENOMYOSIS. During the course of treatment, she had developed headache and back pain after administration of parenteral Tranexamic acid. So Tranexamic acid was withdrawn and alternatively, oral norethisterone was given and Tab. Diclofenac was prescribed to treat Headache and back pain.

INTRODUCTION:

Tranexamic acid (TXA) is a synthetic lysine derivative that acts as an antifibrinolytic drug by inhibiting plasminogen activation and preventing fibrin degradation. TXA is therefore commonly used to reduce preoperative blood loss, particularly during cardiac and orthopedic surgery. However, several clinical studies reported that patients treated with TXA had a higher incidence of seizure after cardiopulmonary bypass. TXA-associated seizure presumably results from inhibition of γ -aminobutyric acid (GABA) and glycine receptors in the brain, as the drug has been shown to inhibit these receptors in embryonic kidney cells and primary cortical neuron cultures.

Back pain and Headache are symptoms rather than a disease condition, there are many causes of back pain, including blood vessels, internal organs, infections, mechanical, and autoimmune causes. The spinal cord, nerve roots, vertebral column, and muscles around the spine can all be sources of back pain.^[8] The common conditions in which back pain occurs include osteoporosis, fractures, Arthritis. The synovial joints of the spine (e.g. zygapophysial joints/facet joints) have been identified as the primary source of the pain in approximately one third of people with chronic low back pain, and in most people with neck pain following whiplash. Less than 2 percent are attributed to secondary factors, with metastatic cancers and serious infections, such as spinal osteomyelitis and epidural abscesses, accounting for around 1 percent. Back pain can also be due to referred pain from another source. Referred pain occurs when pain is felt at a location different from the source of the pain. An abdominal aortic aneurysm and ureteral colic can both result in pain felt in the back.

Along with back pain, headache, Tranexamic acid, Common Drugs That May Cause Back Pain Cholesterol-lowering drugs (statins), Erectile dysfunction drugs (Viagra), High blood pressure drugs (specifically Angiotensin II Antagonists, which are also used to treat heart failure), Diabetes drugs (Metformin), Oral contraceptives (birth control pills). A headache can be a sign of stress or emotional distress, or it can result from a medical disorder, such as migraine or high blood pressure, anxiety, or depression. It can lead to other problems. People with chronic migraine headaches, for example, may find it hard to attend work or school regularly. A wide variety of medicines, including birth control pills, heart drugs, and even pain relief medications, can cause headaches.

CASE REPORT:

A 36 yrs female patient was admitted in Obstetrics and Gynecology of RIMS, a tertiary care teaching hospital, Kadapa, with the chief complaints of Pain in the lower abdomen, Increased frequency of micturition, bleeding per vagina, urinary incontinence. Her menstrual history reveals that she had severe dysmenorrhea.

On general examination the patient was conscious and coherent.

On physical examination temperature was found to be afebrile, P.R-80bpm, BP-110/80mm of Hg, P/A-soft, tenderness below.

On systemic examination, all systems were found to be normal.

On laboratory examination the blood profile reveals the following data. Haemoglobin-11 gm/dl; RBS-123mg/dl, total bilirubin-0.3mg//dl, Direct bilirubin-0.1mg/dl, Indirect bilirubin-0.2mg/dl, Blood urea-24mg/dl, Serum creatinine-0.6mg/dl.

The Ultrasonography of abdomen and pelvis reveals bulky uterus with adenomyosis changes, endometrial thickness- 7mm thin collection noted with endometrium.

Based on all the above examinations she was diagnosed as ABNORMAL UTERINE BLEEDING WITH ADENOMYOSIS and was treated as follows

On Day-1 she was treated with Inj. Tranexamic acid-500mg IV BD, Inj. Cyclopam-10mg IM SOS, Tab. Mefenamic acid-500mg PO BD, Tab. IFA-333.5mg PO OD, Tab. B.complex-67mg PO OD.

As the patients symptoms were slowly subsiding she was treated with the same medication from day 2 to day 7.

On day 8 she complaints of headache, back pain since one day suspecting it as an ADR of Tranexamic acid, the parenteral Tranexamic acid had withdrawn from the treatment and Tab. Norethisterone-5mg PO BD, and to treat the complaints of back pain Tab.Diclofenac-50mg PO BD was added to the treatment.

On Day 9 along with the same treatment 2, pint blood transfusion was done, because the physician was planned to do the surgery.

On day 10 and 11 same treatment was continued.

On day 12 Hysterectomy was done for her to subside the condition, and was discharged.

DISCUSSION:

Thus the above defined headache and back pain has a sequential relationship to Tranexamic acid administration. However, re challenge is not justified due to ethical constraints. This adverse reaction is dose related and can be labeled as type A class of adverse effect. It can be considered as probable (or) likely adverse drug reaction as per causality assessment of suspected adverse drug reactions. The appraised incidence of headache was 50.4% and back pain was 20.7% with tranexamic acid. There are many reports of Tranexamic acid induced headache and back pain. Drug as an etiology was recognized in all most all the studies.

CONCLUSION:

The hint of this written report is to create awareness about the common reactions like headache and back pain with Tranexamic acid which is ordinarily used to reduce blood loss.

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