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ACETAMINOPHEN INDUCED LEUKOCYTOCLASTIC VASCULITIS AND GASTRITIS: A CASE REPORT

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ABSTRACT

Acetaminophen is NSAID, and an analgesic. it's accustomed treat delicate to moderate and pain, to treat moderate to severe pain in conjunction with opiates, or to cut back fever.[4] Common conditions treated embody headache, muscle aches, arthritis, backache, toothaches, sore throat, colds, flu, and fevers. This drug is employed to treat mild to moderate pain (from headaches, catamenial periods, toothaches, backaches, osteoarthritis, or cold/flu aches and pains) and to reduce fever.[4,5] Acetaminophen toxicity or over dose will occur purposefully (when someone wittingly takes over the counseled most daily dose) or accidentally (when a person is unaware, they're taking multiple merchandise containing acetaminophen associate degreed exceeds the counseled maximum daily dose). The most recommended acetaminophen dose is 4 grams/day in an adult and 90 mg/kg/day in in children. Acetaminophen might often cause serious skin reactions. Symptoms may embody skin reddening, rash, blisters, and therefore the side of the skin may become separated from the lower layers. It may also cause serious adverse drug reactions including *Leukocytoclastic Vasculitis*. Serious skin reactions will occur notwithstanding you've got taken acetaminophen within the past with none problems.[6,7]

KEYWORDS: Leukocytoclastic vasculitis, Acetaminophen, NSAID'S, Biopsy, Endoscopy.

CASE DISCUSSION

A 33 year old female patient with pruritic rash on the lower limbs extending up to the trunk and upper limbs with petechiae and purpurea secondary to taking acetaminophen for fever complaining watery vomitings and abdominal inflammation.

INTRODUCTION

Leukocytoclastic vasculitis is a cutaneous, small-vessel vasculitis of the dermal capillaries and venules. It is known as the hypersensitivity and necrotizing vasculitis as well. This circumstance may be idiopathic or may be related to infections, neoplasms, autoimmune disorders, and drugs. Key medical capabilities of leukocytoclastic vasculitis encompass palpable purpura at the decrease extremity, small vessel involvement, and, in approximately 30 percentage of individuals, extracutaneous involvement.[1] Most instances of idiopathic cutaneous, small vessel vasculitis are self-restrained with ninety percentage of instances resolving in weeks to months of onset. Otherwise, remedy relies upon at the severity of ailment and might vary from an oral corticosteroid taper to diverse steroid-sparing immunosuppressive agents. This study describes the assessment and control of leukocytoclastic vasculitis along with gastritis and highlights the position of the interprofessional crew with inside the care of affected patient.[2,3] Acetaminophen could be a pain reliever, NSAID, and an analgesic. it's accustomed treat delicate to moderate and pain, to treat moderate to severe pain in conjunction with opiates, or to cut back fever.[4] Common conditions treated embody headache, muscle aches, arthritis, backache, toothaches, sore throat, colds, flu, and fevers. This drug is employed to treat mild to moderate pain (from headaches, catamenial periods, toothaches, backaches, osteoarthritis, or cold/flu aches and pains) and to reduce fever.[5,6,7] Folks with underlying disease or those with chronic alcohol consumption are at a hyperbolic risk of developing hepatotoxicity with use of acetaminophen. Acetaminophen Toxicity Symptoms Initial symptoms of acetaminophen toxicity will take up to twelve hours to appear. Symptoms and aspect effects include

- Abdominal pain and inflammation
- Irritability
- Generalized weakness
- Loss of appetite
- Pruritic maculopapular rash
- Jaundice
- symptom
- Nausea
- regurgitation
- Gastritis
- GI bleeding
- Convulsions

• Coma

CASE STUDY

The 32 years old female patient with a past medical history of hypothyroidism, epilepsy and hypertension (HTN) and was on treatment with medications Tab. Thyronorm 50mg, Tab. Valproic 20mg, and Met XL respectively who approached to the General Medicine Department with complaint of pruritic rash on the lower limbs in the last 18 days. The patient also complained abdominal pain, non-projectile watery vomiting 6 episodes and anorexia. On examination she had petechiae and purpurea, it was noticed that the pruritic rash over the lower limbs was radiating to the trunk and both the hands. The patient has been taking acetaminophen as a self medication 10 days prior occurrence of the rash. She had a past history of melena, Bariatric surgery 4 years back.

Provisional diagnosis: Drug induced hypersensitivity

VITAL DATA

Fever: 99

BP: 160/80

Pulse: 96 b/min

RR: 22/ min

REVIEW OF SYSTEM

CVS: S1 S2+

CNS: NAD

GIT: Abdominal pain, Spasmodic in nature

GRBS: 89 mg/dl

She was advised to get the Hematology test, Urine culture, LFT, Prothrombin time, APTT, INR, Serum electrolytes which are mentioned in the table below.

Hematology	Result	Normal values
WBC	21× 10^3 microliters	4.5- 11×10^3 microliters
NEUTROPHILS	79.7%	45- 75%
LYMPHOCYTES	15.8%	20- 40%
MONOCYTES	3.1%	2- 8%
EOSINOPHILS	1.3%	0- 6%
BASOPHILS	0.1%	0- 1%
RBC	4.17× 10^6 cells/ mcL	4.2- 5.4 ×10^6 cells/mcL
HGB	12.0 g/dl	12- 16 g/dl

HLT	37.6	
MCV	90 fl	80- 100 fl
MCH	28.7 pg/ cell	27.5- 33.2 pg/ cell
MCHC	31.8	33.4- 35.5 g/dl

Urine	**Result**	**Normal Values**
Albumin	Rare	< 30 mg/g
Pus cells	2-3/ hpf	0-5/ hpf
Epithelial cells	3-4/ hpf	1-5 /hpf
Serum creatinine	0.7 mg/dl	0.5- 1.04 mg/dL
BUN	2-7 mg/dl	6-24 mg/dL

The urine sample was acidic in nature and has a specific gravity of 1.005

Electrolytes	**Result**	**Normal values**
Sodium	135 meq/l	136-146 meq/l
Potassium	4.6 meq/l	3.5-4.5 meq/l
Chlorides	95 meq/l	98-106 meq/l

LFT	**Result**	**Normal values**
T. Protein	0.8 mg/dl	6000-8300 mg/dl
D. Protein	0.2 mg/dl	
SGOT	15 U/L	8-45 U/L
SGPT	17 U/L	7-56 U/L
Alkaline Phosphate	125 U/L	44-147 U/L

Prothrombin Time

Test	18 seconds
Control	13 seconds
PP	11.38
INR	1.5

ANA Profile: negative

The was prescribed the following medications before the tests were done and final diagnosis could be made.

Drug	**Dose**	**Frequency**
Ivf DNS	50 ml/hr	
Inj. Pan	40 mg	BD
Inj. Zofer	4 mg	TID
Syp. Sucral	5 ml	TID
Inj. Buscopan	1 amp	STAT followed by SOS
Tab. Rosuvac	10 mg	OD
Tab. Thyronorm	50 mg	OD
Tab. Valparin	20 mg	OD
Inj. Hydrocort	50 mg	TID
Inj. Atarax	25 mg	BD

The skin biopsy showed the impression of leucocytoclastic vasculitis.

The endoscopy test showed gastritis.

After the test reports were obtained the final diagnosis was made and found to be "ACETAMINOPHEN INDUCED LEUCOCYTOCLASTIC VASCULITIS WITH EROSIVE GASRITIS."

For confirmation the patient was assessed with the Naranjo scale for acetaminophen caused allergic reaction, it showed a result of 7 proved that she suffered from acetaminophen induced gastritis.

On the second day the patient complained spread of rash on the upper limbs as well, for which a dermatology opinion was taken. The abdominal pain was comparatively reduced and the same medications were continued. The patient was advised to take low fat, low cholesterol and moderate protein diet. On the third day when observed the rash/ itching were reduced. No vomitings, abdominal pain. The patient complained multiple elevated skin lesions but weren't associated with itching and sudden increase in abdominal pain with burning sensation, the dose of tab. Pantocid was increased from 40 mg to 60 mg and syp. Sucral was advised to be given TID. The patient also complained sore throat prior onset of lesions. The following day on examination the patient had multiple palpable purpurea. To this the dose of inj. Hydrocort was increased to double that is from 50 mg to 100 mg and Momate cream was added.

On the sixth day, on observation the rash was reduced, mild redness, the patient was symptomatically healing. The attender requested for discharge but was against medical advice.

DISCUSSION

Gastritis and most importantly LCV, secondary to acetaminophen is a potentially serious causing adverse drug reactions. The U.S. Food and Drug Administration (FDA) recently issued a drug safety communication warning that paracetamol can, in rare cases, cause serious skin reactions, also referred to as Severe connective tissue Adverse Reactions (SCARs).[8] The use of NSAIDS increases the chance of GI complications by 3 to 5 folds.[9] Paracetamol is additionally a weak matter of enzyme one (COX 1), however isn't thought of a non-steroidal anti-inflammatory (NSAID).[10] The bulk of suspected paracetamol reactions occur in conjunction with NSAID intolerance and relate to the pharmacologic action of COX 1 inhibition.2 enzyme inhibition blocks the conversion of arachidonic acid to prostaglandins and thromboxane leading to a therapeutic anti-inflammatory effect.[11] The resultant increase in free arachidonic acid can be as an alternative regenerate into cysteinyl leukotrienes. These leukotrienes may end in clinical options of allergic reaction comparable to angioedema, hypersensitivity reaction and bronchospasm.[10] These reactions occur in 1.6% of all patients taking NSAIDs.[12] Though this {can be} the foremost common mechanism by that paracetamol hypersensitivity happens as well, it's still comparatively uncommon with 97% of patients impatient NSAIDs having the ability to soundly take paracetamol.[13,14]

Acetaminophen may be a leading reason behind drug toxicity which will result in serious liver harm and death once the patient exceeds the most daily dose. Awareness should be unfold amongst communities that self medication can have serious facet effects. The medications for minor problems as well as flu, diarrhea, muscle aches and particularly febricity are most ordinarily used for self treatment. Several people, being unaware of the right dosing, frequencies and durations, take these medications every which way as and after they require. This study additionally shows the importance of taking medical recommendation before taking any medication, the patients should tell their prescriber their history so as to induce the appropriate program and proper unwellness riddance.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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