

An Uncommon Case of Purple Urine Bag Syndrome

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Abstract: Here by presenting a case of 66 year old female who presented to the emergency room with complaints of fever with chills and change in colour of urine since last week.

INTRODUCTION

Purple urine bag syndrome is usually a side effect of prolonged catheterisation along with urinary tract infection. Other risk factors for PUBS include alkaline urine, female gender, constipation and chronic renal failure.

CASE REPORT

Here by presenting an uncommon case of PUBS in a 66 year-old lady known case of hypertension and history of ischemic stroke 7 months ago and has been catheterized from last 7 months. Her last catheter was changed 30 days back. She also had history of constipation which worsened over last 7 months. She presented to the emergency room with complaints of fever with chills and change in color of urine since last week.

Systemic examination revealed tenderness in suprapubic region.

Neurological examination revealed:

GCS -E4V1M6

Pupils – Bilateral 2mm reactive to light.

Power of 1/5 in her right upper and lower limb.

Tone increased in right upper limb and lower limb.

Plantar is extensor in right lower limb.

Rest of her examination was normal.

Her urine collection bag had a purple discoloration.

Her Total counts were slightly elevated -12000cells/micro litre.

CRP-14mg/L.

Her LFT ,RFT ,S.Electrolytes were normal .

Her urine examination revealed:



Urinary pH -8, plenty of leukocytes, nitrite- positive.

Her urine culture was positive for Escherichia coli.

Her USG (A+P) is suggestive of cystitis.

DISCUSSION

PUBS (purple urine bag syndrome) is usually a side effect of prolonged catheterisation (per-urethral or suprapubic) along with urinary tract infection (UTI).

Risk factors for PUBS include:

1. Alkaline urine
2. Female gender (increased risk of UTI due to shorter urethra).
3. Constipation (gives more time for bacterial action on tryptophan metabolites).
4. Chronic renal failure (diminished clearance of tryptophan metabolites).

The bluish discoloration is proposed to be due to the breakdown of metabolites of tryptophan by bacteria. This usually occurs in alkaline urine.

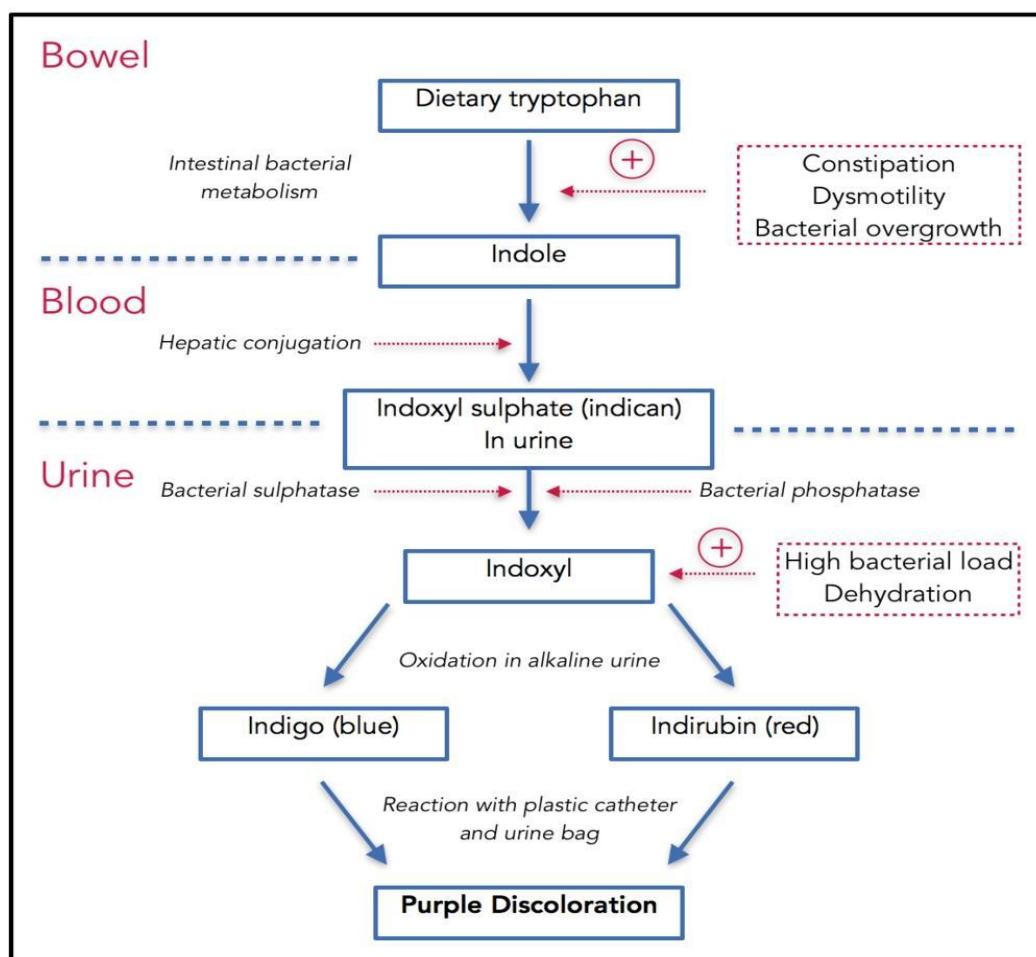
Bacteria implicated in the pathogenesis of PUBS include E. coli, Proteus mirabilis, Pseudomonas aeruginosa, Klebsiella, Enterococci and Group B Streptococci.

A series of biochemical reactions take place within the tubing and bag that start with deamination of tryptophan.

Indole produced from this conjugates to form indican (indoxyl sulfate), which oxidises into blue coloured

indigo and red coloured indirubin. The combination of indigo and indirubin gives a purple hue to the urine collection bag.

The discolouration itself is benign. The underlying UTI is of more concern.



TREATMENT

It includes:

- 1.changing the catheter and urine collection bag.
- 2.Treating the underlying UTI with appropriate antibiotics.

In this patient her catheter was replaced and she was treated with culture-guided antibiotics and patient improved.

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