



# 20<sup>th</sup> European Pathology Congress

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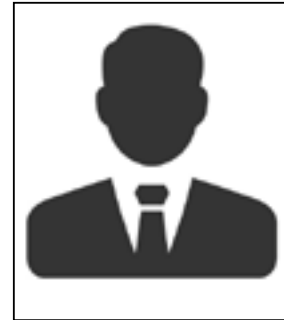
## Speaker

## Title: Pyoderma gangrenosa in post donor nephrectomy patient

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**Introduction:** First described by Brunsting et al in 1930. Pyoderma gangrenosa is an ulcerative disorder of unknown etiology, which is characterised by neutrophilic infiltration of deep dermis along with necrosis and ulceration of overlying epithelium. Association of pyoderma has been described with many conditions like, inflammatory bowel disease, lymphoma, autoimmune disorder as well drug associated. Although previously described due to bacterial infection but recent study shows that immune dysregulation and abnormal neutrophilic function is main pathogenesis of pyoderma gangrenosa. Pyoderma gangrenosa is very rare in renal transplant patient; here we describe a case report who presentation is typical of pyoderma gangrenosa both clinically and histopathologically.

**Case Report:** A 33 years old woman underwent a donor nephrectomy in March 2019. Three to four days after the surgical site closure she developed a small pustular lesion over the surgical site. General condition of the patient was stable, oriented to time, place and person. Her vitals, pulse and temperature were within normal limits. Investigation show increased in total leukocytes counts (24000/ microliter) with differential count within normal distribution. Platelets count was also within normal range. Her renal graft function was appearing to stable with urea and creatinine level of 22 mg/dl and 0.8 mg/dl respectively.

On muco-cutaneous examination, there was involvement of the left side of abdomen just over the surgical site mark. The lesion was in the form of well-defined deep ulcer with a necrotic slough

and bluish undermined edge and violaceous margin. There was surrounding induration. Significant tenderness was also present. No satellite lesion or pathergy noted. Histopathological examination shows stratified squamous epithelial lining with areas of ulceration and necrosis and neutrophilic exocytosis. The underlying dermis shows dense inflammatory cell infiltrate comprises of predominantly neutrophils. There is peri appendageal neutrophilic infiltration.

For this lesion, she received oral and IV antibiotic but did not respond. After that, she also underwent surgical debridement twice with a diagnosis of surgical site infection. After skin biopsy, she started with steroid and lesion improve with steroid treatment.

**Conclusion:** To conclude, pyoderma gangrenosa in post donor nephrectomy patient is very rare, with diagnosis confirmed by clinically and histopathologically and exclusion of other factor

### Biography

Dr. Gyanendra Singh completed his MD Pathology from Institute of Medical Sciences, BHU, Varanasi India, which is one of the prestigious medical colleges in India. He also completed his three-year senior residency and one year fellowship. He completed his research in field of diabetes. He developed this approach based on his years of experience working in hospitals and educational institutions in research, evaluation, teaching, and administration.

## Title: A comparison of post mortem computed tomography and external examination of the neck in suspected hanging cases

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Post mortem Computed Tomography (PMCT) in the 21st century has become an integral feature in forensic medicine. Hanging is the most common method of suicide in the United Kingdom, peaking amongst those aged 45-54 years. This study examined the two methodologies at post mortem to determine if they were complimentary in identifying the cause of death in suspected hanging cases. This study examined 19 cases (mean age, 44) between January and August 2020 at the iGene CT facility in the Coroners mortuary in Stoke-on-Trent. Retrospective images produced using a 'Siemens SOMATOM go. All CT' scanner in a range of different parameters (e.g. KV, pitch, rotation time, slice thickness (mm), increment (mm), Kernel and window were evaluated. Post mortem reports from the external examinations at the Coroners mortuary were anonymised and made available for analyses in comparison to the PMCT data. Tabulated parameters of the written statements as qualitative data were generated and evaluated using descriptive statistical analyses. There are case examples where PMCT is the superior methodology in identifying and interpreting fracture of the hyoid bone where post mortem external presentation showed inconsistencies. From the data available from the 19 cases in 2020, this suggests that PMCT is complimentary to the current conventional method of the external post mortem examination to more confidently identify neck trauma in suspected hanging cases. The documentation and clinical terminology used in reporting post mortem neck trauma

findings requires the development of best practice guidelines to make reporting more consistent.

### Biography

I am a 22 year old graduate of a first class degree with Honours in Forensic Investigations from Staffordshire Police. I currently within the forensics department of Staffordshire Police. I am now embarking on my PhD looking further into Post Mortem Computed Tomography and conventional Post Mortem technologies.

## Title: Ophthalmic and genetics profiles of cystinosis in Tunisian patients

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Ocular cystinosis is a rare autosomal recessive disorder characterized by intralysosomal cystine accumulation in renal, ophthalmic (cornea, conjunctiva), and other organ abnormalities. Patients with ocular cystinosis are mostly asymptomatic and typically experience mild photophobia due to cystine crystals in the cornea observed accidentally during a routine ocular examination. The ocular cystinosis is associated with different mutations in CTNS gene. Cysteamine therapy mostly corrects the organ abnormalities.

In the present study, *In silico* analysis on the functional and structural impact of the reported mutations helps to provide comprehensive insight into molecular mechanisms of cystinosin synthesis, function, and interaction with the lipid bilayer and to better understand the related clinical manifestations observed in eight Tunisian patients.

The studied patients were found to have cystine crystal limited anterior corneal stroma and the conjunctiva associated with retinal crystals accumulation. CTNS gene sequencing disclosed 7 mutations: three missense mutations (G308R, p.Q88K, and p.S139Y); one duplication (C.829dup), one frameshift mutation (p.G258f), one splice site mutation (c.681+7delC) and a large deletion (20327-bp deletion). Crystallographic structure analysis suggests that the novel mutation p.S139Y is buried in a first transmembrane helix closed to the lipid bilayer polar region, introducing a difference in hydrophobicity which could affect the

hydrophobic interactions with the membrane lipids. The second novel mutation p.Q88K which is located in the lysosomal lumen close to the lipid membrane polar head region, introduced a basic amino acid in a region which tolerate only uncharged residue. The third missense mutation introduces a positive change in nonpolar tail region of the phospholipid bilayer membrane affecting the folding and stability of the protein in the lipid bilayer. Our data demonstrate that impaired transport of cystine out of lysosomes is the most common, which is obviously associated with the mutations of transmembrane domains of cystinosin resulting from a total loss of its activity.

In this and our previous study, the finding data demonstrate that the mutational spectrum of the Tunisian patients is particular and different from patients in other countries, probably due to on one hand, the heterogeneous origins of the population and on the other hand due to the still high proportion of marriages between first cousins.

### Biography

I am a research professor at the Faculty of Pharmacy of Monastir, University of Monastir. I have completed my postgraduation at the age of 26 years. I obtained my Master's degree in Molecular and Cellular Biology at the Faculty of Sciences of Sfax, University of Sfax, then the Doctorate degree on pharmaceutical sciences at the Faculty of Pharmacy of Monastir.