How are we performing: Peristomal Pyoderma Gangrenosum in an Inflammatory Bowel Disease Case Series

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Objectives...

• Describe Peristomal Pyoderma Gangrenosum and its relationship with Inflammatory Bowel Disease

• Examine international literature in management of Peristomal Pyoderma Gangrenosum

• Review Tertiary Institution’s management of Peristomal Pyoderma Gangrenosum since opening

• Review the need for multidisciplinary care when managing Peristomal Pyoderma Gangrenosum
What is Peristomal Pyoderma Gangrenosum???

• Neutrophilic Dermatosis

• Chronic Cutaneous Ulcerations

• First Described by Brunsting in 1930
Relationship to Inflammatory Bowel Disease

- Most commonly seen in IBD patients
- Extraintestinal Manifestation of Inflammatory Bowel Disease
Why???

• Identified need for:
  – Review of current management
  – Review of Multidisciplinary Care and Interprofessional Communication
The Team!

Colorectal Surgeon

Gastroenterologist

IBD Nurse

Stomal Therapist

Dermatologist
The Review

- Objectives of case series:
  - Observe current practice within a tertiary setting against international evidence and to make recommendations for future practice
  - Evaluate the efficacy of creating a multidisciplinary approach in managing patients with PPG.
Methodology

• Literature Review
  – Articles since year 2000
  – Written in English
  – Reputable Journals
  – Conducted in Large Health Centres

• Retrospective Case Series Review
  – Cases documented since opening in Feb 2015
Methodology – Retrospective Review

• Diagnosed PPG by Dermatology

• Demographics including other extraintestinal manifestations of IBD

• Management strategies and response to treatment

• Multidisciplinary Communication
### The patients

<table>
<thead>
<tr>
<th>Patient</th>
<th>Gender</th>
<th>Age</th>
<th>CD/UC</th>
<th>History of PG</th>
<th>History of EIM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Male</td>
<td>34</td>
<td>UC with High Grade Dysplasia</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>Male</td>
<td>52</td>
<td>CD</td>
<td>Yes</td>
<td>Yes - Arthritis</td>
</tr>
<tr>
<td>3</td>
<td>Female</td>
<td>56</td>
<td>UC</td>
<td>No</td>
<td>Yes – Arthritis</td>
</tr>
</tbody>
</table>
## The patients

<table>
<thead>
<tr>
<th>Patient</th>
<th>Treatment</th>
<th>Complications</th>
<th>Response</th>
<th>Time</th>
<th>MDT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Topical &amp; Systemic Steroids, Intralesional Steroid Injections, Azathioprine</td>
<td>Pain requiring opioid analgesia, High Stoma Output, Deranged LFT’s on Azathioprine which required ceasing</td>
<td>PR</td>
<td>22.6 weeks (still healing)</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Systemic Steroids &amp; Intralesional Steroid Injection</td>
<td>Nil</td>
<td>PR</td>
<td>9 weeks (still healing)</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Topical &amp; Systemic Steroids, Azathioprine</td>
<td>Deranged LFT’s on Azathioprine tolerated at reduced dose Reoccurrence of PPG on 25/10/16</td>
<td>CR</td>
<td>12 weeks</td>
<td>2</td>
</tr>
</tbody>
</table>
Multidisciplinary Care

• All patients were reviewed by
  – Gastroenterology
  – Stomal Therapy
  – Dermatology
  – Colorectal Surgery

• No patient had documented multidisciplinary communication
What was seen

• All patients were exposed to corticosteroids

• 66% of patients required thiopurine medication

• Patients were mainly male, with ulcerative colitis who have had PG or an EIM of IBD previously

• CR time was 14.5 weeks

• No other treatment avenues were explored

• All patients were seen by all members of the interprofessional team but, there was minimal communication
Literature Review

• 9 peer reviewed journals were consulted
• 106 patients included (IBD Patients n=64)
• Mean time to CR was 11.6 weeks
• Multiple management strategies used
<table>
<thead>
<tr>
<th>Study</th>
<th>Patient No</th>
<th>UC/CD</th>
<th>Data</th>
<th>Treatment</th>
<th>Time to Healing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barbosa et al.</td>
<td>44</td>
<td>93% IBD (27 CD, 12 UC, 2 IDC)</td>
<td>Retrospective</td>
<td>Topical &amp; Systemic Steroids, Biologics, Wound Therapy, Immunoglobulin, Surgery</td>
<td>10.7 weeks</td>
</tr>
<tr>
<td>Lyon et al.</td>
<td>37</td>
<td>Not Identified</td>
<td>RCT</td>
<td>Topical Clobetasol vs Topical Tacrolimus</td>
<td>6.5 weeks (clobetasol) 5.1 weeks (Tacrolimus)</td>
</tr>
<tr>
<td>Arguelles-Arias et al.</td>
<td>6</td>
<td>All had IBD</td>
<td>Retrospective</td>
<td>Topical &amp; Systemic Steroids, Biologics</td>
<td>12.1 weeks</td>
</tr>
<tr>
<td>Study</td>
<td>Patient No</td>
<td>UC/CD</td>
<td>Data</td>
<td>Treatment</td>
<td>Time to Healing</td>
</tr>
<tr>
<td>------------------------</td>
<td>------------</td>
<td>----------------</td>
<td>--------------</td>
<td>---------------------------------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Behm et al.</td>
<td>1</td>
<td>UC</td>
<td>Case Study</td>
<td>Wound therapy, Topical Tacrolimus, Systemic steroids, Oral Antibiotics, Immunoglobulin</td>
<td>5.71 weeks</td>
</tr>
<tr>
<td>Turrion-Merino et al.</td>
<td>4</td>
<td>2 UC, 1 CD, 1 Rectal CA</td>
<td>Retrospective</td>
<td>Systemic Steroids, Topical Tacrolimus, Azathioprine</td>
<td>Average PR time 3.5 weeks</td>
</tr>
<tr>
<td>Walls et al.</td>
<td>1</td>
<td>CD</td>
<td>Case Study</td>
<td>Negative Pressure Therapy</td>
<td>13 weeks</td>
</tr>
</tbody>
</table>
### Articles

<table>
<thead>
<tr>
<th>Study</th>
<th>Patient No</th>
<th>UC/CD</th>
<th>Data</th>
<th>Treatment</th>
<th>Time to Healing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daniels et al.</td>
<td>1</td>
<td>CD</td>
<td>Case Study</td>
<td>Mycophenolate Mofetil, Topical Tacrolimus, Wound Therapy</td>
<td>10 months</td>
</tr>
<tr>
<td>Uchino et al.</td>
<td>11</td>
<td>1 Colorectal CA, 6 UC, 4 CD</td>
<td>Prospective</td>
<td>Topical &amp; Systemic Steroids, Topical Tacrolimus, Biologics</td>
<td>9.8 weeks</td>
</tr>
<tr>
<td>Fahmy et al.</td>
<td>1</td>
<td>CD</td>
<td>Case Study</td>
<td>Ustekinumab, Topical Tacrolimus, Systemic Steroids, TPN</td>
<td>10 weeks</td>
</tr>
</tbody>
</table>
Corticosteroids

• Assists in gaining control of inflammation

• Detrimental long-term

• Need to bridge to other therapies

Saag, Amer J Med 1996
Weljee, PLoS one 2016
Biologics

• Infliximab most published for treating PPG

• No approval pathway under complex drugs program for the indication of PPG

Mimouni, Bri J Derm 2003
Anti-TNF-α agents such as infliximab prevent TNF-α attaching to receptors promoting inflammation.
Topical Tacrolimus

• Highly effective in IBD

• Used topically for other IBD conditions such as Ulcerative Proctitis, Perianal Crohns and Pouchitis

• Can inhibit appliance adhesion

Lawrance, Aliment Pharmcol Ther 2008
Lawrance, Clin Gastro Hep 2017
Wound Therapy

- Hydrocolloids
- Calcium Alginate
- Negative Pressure
- Seals

Walls, JSTA 2011
Rodenbeck, J Am Ac Derm 2015
Thiopurine Medication

- Effective maintenance agents
- Ineffective in gaining remission
- Adverse effects/Long term risks
Surgery

- Required to remove necrotic tissue
- Can make PPG worse

Wu, Gastro 2013
Jackson, Expert Derm 2006
Ishkawa, J WOCN 2015
What’s Important?

• Corticosteroids the good and the bad!

• Topical Tacrolimus effective yet troublesome

• Biologics – Brilliant, yet expensive and specialised
Conclusions

• PPG is a rare

• Managed by a multidisciplinary team with open communication pathways

• Aggressive treatment
Recommendations

• Review management algorithm and add Topical Tacrolimus and Biologics

• Explore avenues where multidisciplinary care can take place