

## Resurfacing wounds of pyoderma gangrenosum- A surgeon's nightmare effective interdepartmental communication is the key to success

Narendra.S.Mashalkar

Associate Professor, Dept. of Plastic Surgery, St. Johns Medical College, Bangalore, Karnataka, India

**\*Corresponding Author: Narendra.S.Mashalkar**

Email: plasticnaren2005@yahoo.co.in

---

### Abstract

**Introduction:** Patients with wounds come in varied forms to a plastic surgeon. Usually chronic wounds which are recalcitrant to conservative treatment require surgical management in the form of resurfacing. All recalcitrant wounds need to be seen with suspicion to identify the underlying systemic disease activity. It is tempting for the plastic surgeon to auto graft each chronic wound as early as possible. This is how a night mare begins. This paper is written with the intention of not hurriedly taking up every chronic wound for resurfacing without properly evaluating the patient and how effective communication with a dermatology colleague will go a long way in benefiting the pt.

**Aims and objective:** 1. To discuss our experience of treating three cases of chronic wounds of P.G and the course and events occurring in each chronic wound till ultimate healing of the wounds. 2. The lessons we learnt during each course.

**Materials and Methods:** A detailed description of course of hospital stay of three cases of P.G with description of interdepartmental discussion and review of literature specifically for surgical management of such wounds.

**Results:** Three cases of chronic wounds of which one had active disease healed with conservative mx and the second case in which the disease became quiescent, a pathergy graft test was done, which eventually had no consequences, later a formal ssg was done with no complications. The third case developed new wounds at surgical sites and conservative management was applied.

**Conclusion:** Lessons learnt; 1. Grafting wounds in cases of chronic wounds with P.G needs to be proceeded with extreme caution. 2. Pathergy test ssg to see for flare ups and to proceed when the disease is quiescent or in inactive phase. 3. Interdepartmental communication is very necessary in such cases.

**Keywords:** Split skin grafting, Pathergy test, Conservative.

---

### Introduction

Pts with wounds come in varied forms to a plastic surgeon. Usually chronic wounds which are recalcitrant to conservative treatment, require resurfacing. All recalcitrant wounds need to be seen with suspicion to identify the underlying systemic disease activity. It is tempting for the plastic surgeon to auto graft each wound and cover the wound as early as possible. And this is the way a problem may arise on the wound as well as donor site if adequate screening for P.G is not done. This paper is written with the intention of viewing chronic non healing wounds with suspicion, evaluate thoroughly, collaborate with a dermatologist and with the disease in quiescent phase to take up the pt for resurfacing with split thickness auto grafting. This understanding will go a long way in benefiting the pt.

### Aims and Objective

To discuss our experience of treating three cases of chronic wounds of P.G and the course and events occurring in each chronic wound till ultimate healing of the wounds. The lessons we learnt during each course.

### Materials and Methods

A detailed description of course of hospital stay of three cases of P.G with description of interdepartmental discussion and review of literature specifically for surgical management of such wounds.

### Case 1

A 31-year-old female was referred from a private hospital with a diagnosis of cutaneous Koch's. She had painful spreading ulcerative lesions in the perineal area.

### Case 2

A case of P.G with large ulcer on the Antero lateral aspect of the left leg measuring 21 \* 26 cms of ulcer since 5 years.

### Case 3

Pt with P.G were surgery resulted in wounds at various sites.

### Results and Discussion

All the three cases which were seen by us were considered potential candidates for surgery i.e skin grafting. Each case had a different course of stay and events. Elaborating on the same lines. The first case which had chronic non healing wounds of the genital and perineal region had been initially treated as cutaneous Koch's and had undergone a series of investigations for the same.

Upon being referred to us for considering surgical management we had a discussion with dermatology dept, this made us take a safer route with dressings and pathergy testing, also it made us to confirm that the respective pt were in quiescent phase and then perform surgery. As our discussions progressed further a decision was taken to manage the pt conservatively as the pt was in active phase of the disease. All the wounds had healed in a period of 6 months with only dressings. Tay\_YK et al noted in their

report that early detection of P.G wounds in pts would avoid surgical procedures and hence effective control of wound can be done by medical management.<sup>1</sup>

The second pt had a chronic non healing wound on the leg with P.G. This case was referred to us by the dept of dermatology stating that we could go ahead with resurfacing as the pt was in quiescent phase. Upon further discussion a safer route was decided to be adopted i.e to do a test graft and see for the response. Pathergy testing gave us the confidence to go ahead with formal split thickness skin grafting for the large wound Pt had a 100% graft take with donor area completely healed.

The protocol followed for the second case were as follows. Investigating the pt to rule out causes of wounds, involving dermatology dept and discussing the possibility of phase of disease, instituting immunosuppressive therapy, pathergy testing, fitness for surgery, wound care. Resurfacing wound with ssg was done with adequate care being given to donor area as well. A lesson was learnt.

Pichler M et al in their study of 15 cases of P.G have shown that wound preparation with adequate immunosuppressive therapy under NPWT Control have given good results and it can be considered as a treatment option.<sup>2</sup> Sick I, Trautner B in their study noted that they were able to graft the wounds with ssg once the pt was in quiescent phase along with added immunosuppression. We found a similar pattern in our study<sup>3</sup>. Our third pt was case of chronic non healing wounds on thigh in whom new wounds had developed post-surgery. The protocol followed for the third case were as follows. Investigating the underlying disease, involving dermatology dept and discussing the possibility of phase of disease, instituting immunosuppressive therapy, wound care.

This case was managed with dressings alone but the healing took almost a year to resolve. Cabalag MS, et al also noted that wounds would otherwise take a long time to heal, with added complications of infection in chronic wounds<sup>4</sup>. Also, it is to be noted that long term systemic immunosuppression is another risk factor.<sup>4</sup> Cabalag MS, Wasiak et al noted that surgical treatment without immunosuppressive drugs may further aggravate the condition of wounds<sup>4</sup>. Fullbright RK et al have shown in their report regarding P.G at surgery sites, hence they state that early recognition is very important to prevent unnecessary management towards infectious agents<sup>5</sup>. Upon literature search on medical management of Pyoderma Gangrenosum we could understand that the disease we were dealing with was a variant of P.G called granulomatous variant which is a localized, vegetative form of Pyoderma Gangrenosum with verrucous and ulcerative lesions.<sup>6</sup>

It was originally described as malignant pyoderma but is now considered to be a variant of Pyoderma Gangrenosum.<sup>6</sup>

Treatment of Pyoderma Gangrenosum involves treating underlying disease, if any is found. Systemic glucocorticoids are the most effective treatment.

Continued suppression of inflammatory process may require regular pulses at 2 weekly intervals initially

followed by a 4 weekly schedule once the lesions have healed and there is no evidence of reactivation. The pulses are continued for 3-6 months after complete remission is achieved.<sup>6</sup> Alam M, Gros et Al have shown that surgical treatment may be required in pts having multiple medical problems<sup>7</sup>. But the same protocol needs to be followed. Courtney S has given the approach to treatment as careful exclusion of other disorders before making a formal plan for wound coverage<sup>8</sup>.



Case 1 Wound



Case 1 Healed



Case 2 Pre OP



Case 2 Post Op



Test SSG Case 2



Healed Donor Area Case 2

### Conclusion

1. Grafting wounds in cases of chronic wounds with P.G needs to be proceeded with extreme caution.
2. Pathergy test ssg to see for flare ups and to proceed when the disease is quiescent or in active phase.
3. Interdepartmental communication is very necessary in such cases.

A team approach with involvement of dermatology dept and having a thorough surgical plan with resurfacing when the pt is in quiescent phase of disease will go a long way in benefitting the pt.

### Abbreviations

1. Pt = patient
2. P.G = pyoderma gangrenosum.
3. Ssg = split skin grafting.
4. NWPT = negative wound pressure therapy.

### References

1. Tay YK, Friednash M, Aeling JL. Acute pyoderma gangrenosum does not require surgical therapy. *Arch Fam Med* 1998;7(4):377-80.
2. Pichler M, Larcher L, Holzer M. Surgical treatment of pyoderma gangrenosum with negative pressure wound therapy and split thickness skin grafting under adequate immunosuppression is a valuable treatment option: Case series of 15 patients *JAAD* 74, 4
3. Sick I, Trautner B, Ruzicka T. Surgical management of Pyoderma gangrenosum. *Hautarzt* 2012;63(7):577-83.
4. Cabalag MS, Wasiak J, Lim SW, Raiola FB. Inpatient management of pyoderma gangrenosum: treatments, outcomes, and clinical implications. *Ann Plast Surg* 2015;74: 354-60.
5. Fulbright RK, Wolf JE, Tschen JA. Pyoderma gangrenosum at surgery sites. *J Dermatol Surg Oncol* 1985;11(9):883-6.
6. Mamta A et al. Localized granulomatous pyoderma gangrenosum. *Indian J Dermatol Venerology* 2003;69:80-82
7. Alam M, Grossman ME, Schneiderman PI, Blume RS, Benvenisty AI. Surgical management of pyoderma gangrenosum: case report and review. *Dermatol Surg* 2000;26(11):1063-6.
8. Courtney Schadt, Pyoderma gangrenosum: Treatment and prognosis

**How to cite this article:** Mashalkar NS. Resurfacing wounds of pyoderma gangrenosum- A surgeon's nightmare Effective Interdepartmental Communication is the key to success. *J Surg Allied Sci* 2019;1(2):37-9.