INTEGRATIVE REVIEW ARTICLE

SCIENTIFIC EVIDENCES ABOUT THERAPIES FOR PYODERMA GANGRENOSUM:
AN INTEGRATIVE REVIEW

EVIDÊNCIAS CIENTÍFICAS ACERCA DAS TERAPÊUTICAS PARA O PIODERMA GANGRENOSO:
REVISÃO INTEGRATIVA

EVIDENCIAS CIENTIFICAS ACERCA DE LAS TERAPIAS DE PIODERMA GANGRENOSO: UNA REVISIÓN INTEGRADORA

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ABSTRACT

Objective: to analyze the scientific evidences about the therapies for pyoderma gangrenosum. Method: an integrative review, in the period from 2005 to 2015, in the Lilacs, Medline and SciELO library. The process was guided by the question: What are the scientific evidences about the current treatment for Pyoderma Gangrenosum? The data analysis was performed in a descriptive way. Results: the evidences were synthesized from the corpus of study, consisting of 15 primary studies. All studies were case studies and addressed the therapy from two perspectives: topical and systemic. Conclusion: it is recommended that the association between both topical therapies and systemic, which include the use of corticosteroids, rifampicin, infliximab, hyperbaric oxygen therapy and occlusive dressings with covers of thin foam or hydrocolloid. Descriptors: Pyoderma Gangrenosum; Therapeutic; Clinical Practice Based on Evidences.

RESUMO

Objetivo: analisar as evidências científicas acerca das terapêuticas para o Pioderma Gangrenoso. Método: revisão integrativa, no período de 2005 a 2015, nas bases de dados Lilacs, Medline e na biblioteca SciELO. O processo foi norteado pela pergunta: Quais as evidências científicas acerca das terapêuticas atuais para o Pioderma Gangrenoso? A análise dos dados foi realizada de forma descritiva. Resultados: as evidências foram sintetizadas do corpus do estudo, composto por 15 estudos primários. Todos os estudos analisados eram estudos de caso e abordavam a terapêutica sob duas perspectivas: tópica e sistêmica. Conclusão: recomenda-se a associação entre ambas as terapias tópicas e sistêmicas, que incluem o uso de corticoides, rifampicina, infliximab, oxigenoterapia hiperbárica e curativos oclusivos com coberturas de espuma fina ou hidrocolóide. Descritores: Pioderma Gangrenoso; Terapêutica; Prática Clínica Baseada em Evidências.

RESUMEN

Objetivo: analizar las evidencias científicas acerca de los tratamientos para el pioderma gangrenoso. Método: esta es una revisión integradora, en el periodo de 2005 a 2015, en el MEDLINE y LILACS, SciELO biblioteca. El proceso fue guiado por la pregunta: ¿Cuáles son las pruebas científicas acerca del tratamiento actual para el pioderma gangrenoso? El análisis de los datos se realizó de manera descriptiva. Resultados: las evidencias fueron sintetizadas a partir del corpus de estudio consta de 15 estudios primarios. Todos los estudios fueron estudios de casos y la terapia dirigida desde dos perspectivas: tópica y sistémica. Conclusión: Se recomienda que la asociación entre ambos tratamientos tópicos y sistémicos, que incluyen el uso de corticosteroides, rifampicina, infliximab, oxigenoterapia hiperbárica y vendajes oclusivos con cubiertas de fina espuma o hidrocolóide. Descriptores: Pioderma Gangrenoso; Medicamentos; La Práctica Clínica Basada en la Evidencia.

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INTRODUCTION

Pyoderma gangrenosum is a rare skin disease and inflammatory, but of unknown etiology, which was first reported in 1924 and described in 1930. This terminology is due to the fact that it was initially believed that this grievance configured as an infection caused by Streptococcus, which resulted in a gangrenous lesion.¹

Currently, it is known that this disease is owned by necrotizing neutrophilic dermatosis of unknown cause, which has a wide range of forms of presentation; however, it is common in this phenomenon the presence of lump or painful pustule that ruptures and forms an ulcer progressing quickly. Normally, they are covered with pus, have necrotic centers with irregular or indeterminate purplish edges.² ³ This condition is commonly classified into four groups: ulcerative (classic), bullous, pustular, and vegetative.⁴ From these clinical variants, the ulcerative form is the most prevalent.⁵

It is central to inform that there is no specific diagnostic marker. Thus, the diagnosis is made by assumption and/or elimination of other etiological hypotheses, such as deep mycoses, Mycobacterium leprae infections or tuberculosis, leishmaniasis and Vasculitis self-immune. It is notable that lesions may appear in isolation, but in 70% of cases are associated with other systemic diseases, especially immune disorders and diseases of the gastrointestinal tract, such as ulcerative colitis and Crohn’s disease, arthritis, Takayasu arteritis.² ⁶

The actual incidence of Pyoderma gangrenosum is still unknown, since it is not known any population-based study regarding this condition.⁷ However, research conducted in Mexico estimated that between 3 to 10 patients per million inhabitants per year have this disease, most common among people aged 20 and 50, predominantly female.⁸

This disease, usually, is rare in children (less than 4% of cases), and ends the most commonly affected sites, especially the lower limbs, but may involve the head, face, arms, hands, trunk, periorificial regions.⁹

In Brazil, the patient evaluation with this injury treated at a Dermatology Service of Porto Alegre from 2000 to 2006 revealed that most are adults, females (62.5%) with ulcerative form (81.25%) with lesions in the lower limbs (87.5%) and concomitant systemic disease, Crohn’s disease (12%), the Collagen (12%) and diabetes (12%) the most frequent.¹⁰

When considering the multiple forms of presentation and epidemiological variability of this phenomenon it is necessary to explain that the therapeutic approach is also variable, depending on the extent and depth of the lesion, the patient’s condition, risk tolerances and the chosen treatment. So that the overall objective of therapeutic approaches should be to reduce the inflammation of the injury making progress to reduce pain and adverse effects, control of underlying diseases and/or even cure.¹¹

Considering the extensive possibility of therapeutic interventions, whether topical or systemic, it aimed at reestablishing the patient’s quality of life with Gangrenous pyoderma is considered relevant to verify the current evidence about the current therapies for pyoderma Gangrenosum. In this context, it was defined as objective of this study is to analyze the scientific evidences about therapies for pyoderma Gangrenosum.

METHODOLOGY

The study is characterized as an integrative review,¹² ³ operationalized through six steps which are closely interlinked: elaboration of guiding question, literature search, data collection, and critical analysis of the included studies, discussion of results and presentation of integrative review.¹⁴

The guiding question of revisional process was built by the PICO strategy (P = Patient or Problem, I = Intervention, C = Comparison or Control, O = Outcomes)¹⁵. Which are the scientific evidences about the current treatment for pyoderma Gangrenosum?

For search of articles, we used the databases: Latin American and Caribbean Health Sciences (LILACS), Scientific Electronic Library Online (SciELO) and Medical Literature Analysis and Retrieval System Online (Medline).

The survey in the literature occurred in the months of May and June 2016. For the literature there was used the Boolean marker and among registered controlled descriptors in the Descriptors in Health Sciences (DECS) and Medical Subject Headings (MeSH Terms). The combinations were carried out: gangrenous pyoderma (DECS) AND therapy (DECS) AND Pyoderma Gangrenosum (MeSH) AND Therapeutics (MeSH), as expressed in Figure 1.

It was established as inclusion criteria: primary education available free in databases, that addressed the subject, published in Portuguese, English and Spanish, from 2005 to 2015 there were excluded from the theses and dissertations and those studies that found repeated in the surveyed bases.
From the combination of descriptors there were identified 126 studies in Lilacs, Scielo in 54 and 33 in Medline. Firstly, the selection of studies was carried out by reading the title and summary for verification of compliance with previously established inclusion criteria. Thus, it included only 9 studies Lilacs, Scielo 8 and 4 of Medline (Figure 1).

It is important that these 21 studies were critically analyzed by an instrument proposed by Brazilian researchers. After application of the instrument and critical analysis of research studies there were excluded 6 for not having consistency in the discussion of therapy used for pyoderma Gangrenosum totaling the inclusion of 8 studies that allowed to observe, describe and classify data in order to group the knowledge produced according to the theme of the study (Figure 1).

RESULTS AND DISCUSSION

After the critical reading of studies there was organized a synoptic table with the characterization of scientific production according to the authors, year of publication, title of the study, methodological design used journal that published the study and type of intervention described and/or evaluated.
It is observed that the analyzed scientific evidences were present: Since most were the last five years - three for the year 2015 and two to the year 2011. All the studies analyzed had converged methodological approach: a case study, of course, the nature of the problem which is not so frequent. Most newspapers were international and studies addressed the therapy from two perspectives: topical and systemic - focus of this study.

It recognizes that Pyoderma gangrenosum is a debilitating skin condition of unknown etiology and rare manifested as painful injury and is often associated with inflammatory disease or self-immune. It was observed that there, over time, the spread of different therapeutic alternatives, but none of them has proven to be effective in all circumstances. 16-19

In this perspective the literature states that the Pyoderma gangrenosum is a complex problem that requires a rigorous evaluation, with an emphasis on clinical history and an individualized care plan. 17,20 In this sense, the evidence shows that the methods have been quite variable both in perspective topical as systemic. There are descriptions of clinical cases used since corticosteroids, cyclosporine, tacrolimus, mycophenolate, azathioprine, cyclophosphamide, dapsone, Sulfasalazine, Mercaptopurine, Isotretinoin, Immunoglobulins, Colchicine, rifampicin, clofazimine, Infliximab to Hyperbaric oxygen therapy. 6,16-23.

Even with the multitude of alternatives, it is emphasized that the immunosuppression has been evidenced as the mainstay of treatment - from the use of systemic steroids and...
cyclosporine, but also topical corticosteroids and topical tacrolimus for slight forms.\textsuperscript{21}

However, professionals need to be sensitive to the demands of the patient, after all there are groups that respond well to systemic corticosteroids, as it is for others this therapeutic contraindicated, especially the cause for the inflammatory comorbidities and predisposition to pyoderma. Furthermore, it is believed that patients suffered from side effects of this therapy, other underlying illnesses, ranging from bone loss or weight gain until swelling material will not support the new therapy.\textsuperscript{17} Implemented this perspective, it is necessary to describe that there other systemic therapeutic possibilities include use of agents such as infliximab, methotrexate, and cyclosporine rifampicin.\textsuperscript{6,21}

The use of infliximab was described in a satisfactory manner, in a case study conducted in the Canary Islands, Spain. The researchers began treatment with the administration of 5 mg / kg for eight weeks. At the end of the procedure the patient developed complete reepithelialization area.\textsuperscript{21} Although the pathophysiology of gangrenous pyoderma is unknown, it appears to be a response of T cells that activate tumor necrosis factor, which in turn plays a crucial role in the inflammatory response, causing activation of neutrophils, leading to tissue damage.\textsuperscript{24}

Another case study described the use of rifampin as a therapeutic option for this problem. In this study, the patient was asymptomatic and followed without treatment for a period of three years. Rifampicin is a bactericidal drug which has an immunosuppressive activity both in animals and in humans, providing a reduction of cellular and humoral immune response to various antigens, including the activity of T cells.\textsuperscript{6}

It is observed, therefore, that the gangrenous pyoderma has been a challenge for the multidisciplinary team, from the difficulties of diagnosing the lack of gold standard scientific evidences, although the hyperbaric oxygen therapy will be recommended in a satisfactory manner by some studies.\textsuperscript{16,18,22-23}

One case study of a male patient, 50 years old, with an extensive and deep ulcer on the left leg, has progressed with excellent results after HBOT association and skin graft immunosuppressive therapy initially proposed.\textsuperscript{22}

The Gangrenous pyoderma is a poorly understood dermatological disease difficult to diagnose, which implies suffering, impact on quality of life and prolonged treatment.

The evidence summarized point to a horizon of therapeutic possibilities for this objection that are topical or systemic action, and choosing the best therapy depends on the
characteristics of the patients, the course of the disease and associated conditions.

The analyzed studies recommend that there is an association between both treatment approaches (topical and systemic), as these are complementary and mutually contribute to overcoming the limitations caused by the gangrenous nature injuries. Concerning the systemic agents, there was highlighted the use of Corticosteroids, rifampicin, clofazimine, Infliximab and hyperbaric oxygen therapy. Topical agents are numerous, but there is a consensus regarding the use of occlusive dressings with thin foam covers or hydrocolloid.

REFERENCES


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