Received: 24 August 2020 | Revised: 18 September 2020 | Accepted: 6 October 2020

DOI: 10.1111/jocd.13800

ORIGINAL CONTRIBUTION

JCD Journal of Cosmetic Dermatology WILEY

Topical β-blockers for pyogenic granulomas: A promising option for younger patients

Abd El-Aziz Ibrahim El-Taweel MD[1] | Abdul-Aziz Abdul-Salam Ahmed Al-Refaie MD[2] | Khalid Hamdy Awad Salem MBBcH[3] | Rehab Mohammed Salem MD[1]

[1]Faculty of Medicine, Benha University, Benha, Egypt

[2]Faculty of Medicine, Beni-swif University, Beni-swif, Egypt

[3]Ministry of Health, Cairo, Egypt

Correspondence
Rehab Mohammed Salem, Faculty of Medicine, Benha University, Postal code 31111, Benha, Qalubia Governorate, Egypt.
Email: Rehabsalem122@yahoo.com

Abstract

Background: Topical β-blockers, propranolol, and timolol were used for pyogenic granuloma (PG) treatment; however, their efficacies and safety profiles were not compared.

Aims: The aim was to evaluate the safety and efficacy of propranolol 1% and timolol 0.5% creams in the treatment of pyogenic granulomas.

Patients: The study included 30 PG patients. They were divided into three groups (10 patients each). Group I patients received propranolol 1% cream. Group II patients used timolol 0.5% I cream. Group III patients used placebo cream. Creams were applied twice daily for 2 months. Patients were followed up for 3 months to detect any recurrence.

Results: Complete resolution was reported in 6 patients of groups I and II, while none of the control patients reported complete resolution. Despite the absent change in lesions' size in 40% of β-blockers treated groups, they all reported decreased bleeding tendency. There was insignificant difference between the clinical responses between β-blockers groups. No recurrence was reported in any of the patients who achieved complete resolution after 3 months of follow-up. Younger patients respond better to β-blockers. Three patients were deteriorated on beta-blockers treatment.

Conclusion: β-blockers are a promising PG treatment option in cases where invasive modalities are not desirable especially in younger patients.

KEYWORDS

Beta-blockers, propranolol, pyogenic granuloma, timolol, young

1 | INTRODUCTION

Pyogenic granuloma (PG) is a benign vascular disorder which can affect mainly the skin and may affect the mucous membranes.[1]

Usually, pyogenic granulomas follow a self-limiting course. They can disappear within 6 to 18 months, but sometimes they persist. Several PG treatments are available including surgical removal, curettage and cauterization, laser and topical imiquimod. However, each therapeutic option has its own limitations.[2] The scarcity of comparative studies between different treatment options does not help the physicians to determine which treatment is better.

Beta-blockers are drugs that block beta-adrenergic receptors preventing their interaction with their ligands, norepinephrine, and epinephrine. Beta-blockers were developed for the first time in the United Kingdom in 1962 by Sir James Black for which he was awarded the Nobel prize in 1988.[3] They were used widely for hypertension, cardiac, and ocular indications, but more recently they have been used in a number of dermatological diseases including vascular tumors, rosacea, malignant melanoma, and adrenergic urticarial.[4]

