

TOPICAL APPLICATION OF RAPAMYCIN 0.4% FOR TREATMENT OF FACIAL ANGIOKERATOMAS IN A PAEDIATRIC PATIENT

F.D. Fernández Ginés¹, T.B. Rodríguez-cuadros², J.M. Ruiz González³, P. Nieto Guindo¹

¹TORRECÁRDENAS HOSPITAL, DEPARTMENT OF PHARMACY, ALMERÍA, Spain.

²Health Sector of Berja, COMMUNITY MEDICAL DEPARTMENT, ALMERÍA, Spain.

³LA INMACULADA HOSPITAL DEPARTMENT OF PHARMACY, HUERCAL OVERA, Spain.

Background

Angiokeratomas are benign vascular skin lesions characterized by proliferation of dilated blood vessels in the upper dermis. Some variants have been described that can affect to different regions of the body including face and genitals. They may be isolated or clustered and appear as small red-to-black papules, with a smooth epidermal surface. As the disease progresses, the lesions grow, reaching a diameter of 10 mm, and become dark red to black, with a verrucous surface. Depending on the characteristics of the lesions can be treated with surgery or laser for aesthetic reasons. On the other hand, some investigators have also proved that topically applied rapamycin causes regression of facial angiokeratomas, giving better cosmetic results

Purpose

To evaluate the efficacy and safety of the topical application of 0.4% rapamycin ointment in a facial angiokeratoma

Material and methods

We report on a paediatric patient who presented with facial angiokeratomas. Rapamycin ointment was performed at a concentration of 0.4%, mixing with white petrolatum and petroleum jelly under safe conditions in a vertical laminar flow hood. Efficacy was measured on a pediatric judgement and through a monthly photographic examination. Safety was measured in terms of irritation and burning sensation. The patient was followed up for 1 year of treatment.

Results

The case of a male patient 12 years of age [31 kg and 140 cm] is presented. After being approved the treatment in the Commission of pharmacy of our hospital, the patient starts the treatment with one application every night. A photographic examination is performed, where an improvement was seen in the right malar zone, infraorbital, although the nasal area presented without changes. The patient had no irritation and burning sensation during treatment. The response of these vascular skin malformations to rapamycin, an mTOR inhibitor, suggests that activation of the PI3K/Akt/mTOR pathway in endothelial cells may play a role in the pathogenesis of angiokeratomas.

Conclusions

Topical rapamycin appears to be a promising and effective way of treating facial angiokeratomas. The major disadvantage is the cost of therapy which is prohibitively expensive at the present date