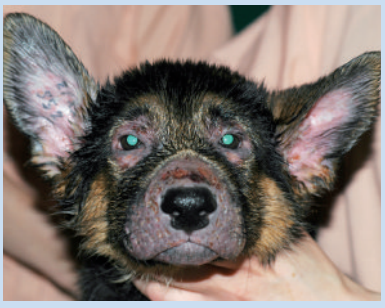
# GENERALIZED PYOGRANULOMATOUS DERMATITIS AND JUVENILE LYMPHADENITIS TREATED BY CYCLOSPORINE A: A REPORT OF 5 CASES



**E. GUAGUÈRE [1], A. MULLER [1], F. DEGORCE-RUBIALES [2],**

[1] Clinique Vétérinaire Saint Bernard, Lomme, France.
[2] Laboratoire d'Anatomie Pathologique Vétérinaire du Sud-Ouest, Toulouse, France.

Pyogranulomatous dermatitis and juvenile lymphadenitis (PDJL) is an enigmatic skin condition of sudden onset, seen regularly in puppies. The cause is unknown, even if an immunological mechanism is suspected. Skin lesions are often localized, more rarely generalized *(Guaguère et al, 2005 ; Gross et al, 2005)*.

The objective of this open study was to describe 5 cases of generalized pyogranulomatous dermatitis and juvenile lymphadenitis (GPDJL) associated with severe systemic clinical signs, refractory to oral glucocorticosteroids, then successfully treated with cyclosporine A.

## MATERIAL AND METHODS

We treated 3 German Shepherd puppies (10 weeks of age) belonging to the same litter and 2 Golden Retriever puppies (10 weeks of age), affected by GPDJL refractory to oral prednisolone (1-2 mg/kg SID for 2 weeks). Diagnosis was based on clinical signs (general and dermatological), typical histopathological lesions, negative skin scrapings and sterile bacterial cultures from intact and closed lesions.

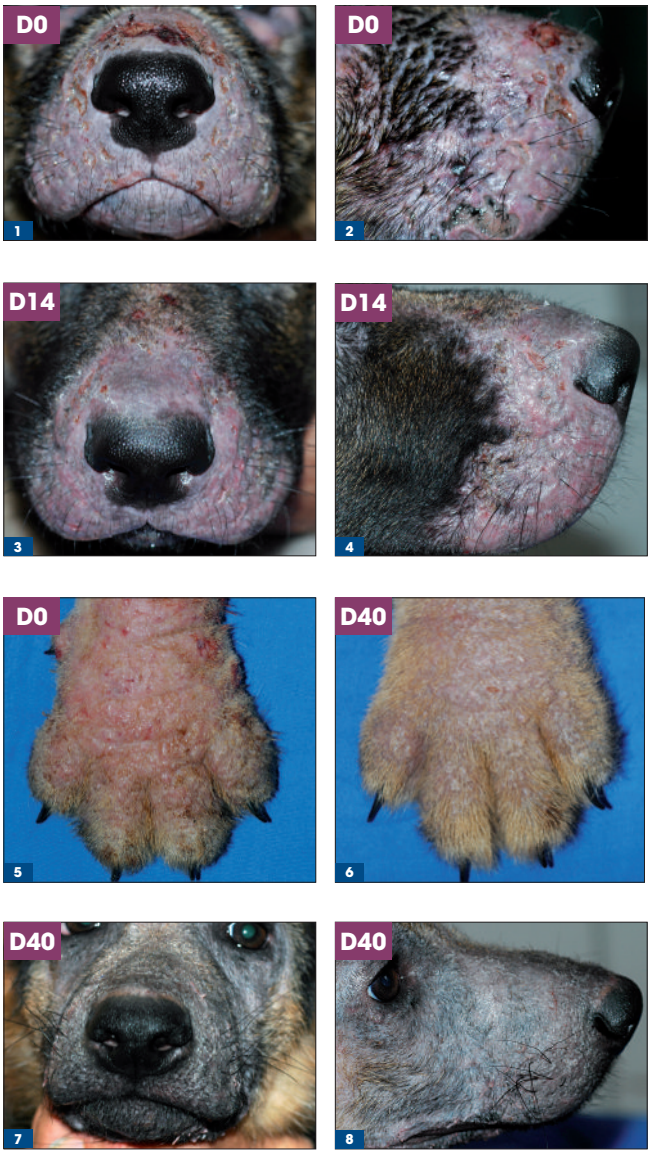
Antibacterial shampoos (Chlorhexidine at 3% (Pyoderm® Virbac)) were used every 2 to 3 days. Ear cleaning preparations (Epiotic® (Virbac)) were prescribed every 2 days. Cyclosporine A (Atopica® (Novartis)) was given (5 mg/kg SID orally) for 1 month, then at the same dosage every 2 days for 3 weeks and finally every 3 days for 3 weeks.

## RESULTS

In all cases, systemic signs included a severe febrile syndrome, anorexia, apathy, pain and arthralgias. Dermatological signs were dominated by bilateral symmetrical facial and pedal erythematous, crusty, erosive and edematous dermatitis. Preputial and anal similar lesions were observed in all cases. Bilateral suppurative otitis was seen in 4 cases. A marked generalized peripheral lymphadenopathy was always present.

Superficial cytological examination revealed bacterial colonization (cocci). Fine-needle aspiration cytology of closed and intact lesions demonstrated macrophages, fat vacuoles and neutrophils. Histopathological lesions of intact skin biopsies revealed granulomatous to pyogranulomatous inflammation centered on sebaceous and apocrine sweat glands.

The average posology of cyclosporin was 5.2 to 6.6 mg/kg SID. Clinical improvement was progressively seen within 2 - 3 weeks. A complete recovery of the general signs (pain, fever,...) was observed within 2 weeks on average in all cases. Cutaneous edema rapidly decreased in 2 weeks. Other skin lesions (erosions, crusts) disappeared gradually. Time needed for resolution was variable, between 6 and 9 weeks. No relapse was observed within 2 years. No side effects were reported in all cases.




## CONCLUSION

Cyclosporine A (5mg/kg SID on average) is effective for treating dogs with GPDJL refractory to oral glucocorticosteroids. Tolerance is excellent. The use of cyclosporine A is justified based on the immunological dysfunction theorized as an etiological cause of GPDJL *(Scott et al, 2001; Gross et al 2005)*. Cyclosporine A is a potent inhibitor of cell-mediated immunity, in part due to acting as an inhibitor of secretion of interferon-γ by T cells (*Koo et al 2003; Guaguère et al, 2004*). Interferon-γ downregulates intercellular adhesion molecule 1 expression, inducing decreased migration of inflammatory cells from the blood to the skin *(Koo et al, 2003; Guaguère et al 2004)*.

In another case report, the use of an immunosuppressive dosage of cyclosporine (10 mg/kg SID) was necessary to obtain complete remission *(Santoro et al, 2011)*. Randomized controlled trials must be performed to determine the effective dosage of cyclosporine A.

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**REFERENCES**
**Please contact eguaguere@nordnet.fr**

**CORRESPONDENCE :**
ERIC GUAGUERE
Clinique Vétérinaire Saint-Bernard
598, avenue de Dunkerque
F-59160 Lomme – France
Phone: 33 3 20 93 67 55
Fax: 33 3 20 22 87 32
Email: eguaguere@nordnet.fr

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