

# Psittacine Toe Constriction Syndrome

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A clinical condition seen most often in young eclectus, African grey and macaw chicks, is a circular constriction around the toe. One or more toes may be involved on one or both feet. Usually the distal toe is the site (Flammer, 1986).

The lesion is a narrow, deep constricting annular band around the digit which results in oedema of the distal portion. If untreated, some digits will become avascular and slough, others may resolve to a circular "scar" which is clearly visible through adult life.

## Aetiology

The cause of this condition is not known (Flammer, 1986). Several theories have been offered including trauma to the toes (Muser, 1991), trauma and subsequent fluid loss to an absorptive substrate resulting in scar tissue (Clipsham, 1989), and remnants of embryonic membranes entangling the digit (Harris, 1990).

A condition in rats known as "ringtail" has marked similarities to the toe condition in birds (Harkness and Wagner, 1977, Petrak, 1989). Ringtail is associated with low ambient humidity (20%) and a related aberrant response of the temperature-regulating vessels in the tails of neonatal rats. One or more annular constrictions may develop and progress through oedema to necrosis of the tail distal to the constriction. Neonatal rats are poikilothermic up to about 2 weeks of age. Newly hatched altricial chicks are also poikilothermic (Griminger, 1976).

Ringtail is not seen if relative humidity is high (50%) and increased humidity in nest boxes in a group of eclectus chicks treated by the author eliminated toe conditions. Other authors have commented on the preventive effects of increasing humidity (Clipsham, 1989; Bond, 1991).

In view of no reports of histopathological changes other than oedema and no recovered microorganisms (Flammer, 1986), it is not unreasonable to assume the condition is caused by unusual peripheral vascular change in response to altered environmental humidity.

## Treatment

Early detection, when oedema is minimal, allows most toes to be saved. The promotion of

renewed circulation by poulticing, hot soaks, massage and DMSO have proved effective (Clipsham, 1989).

More advanced lesions may respond to several relaxing incisions through the constrictive band prior to the above treatment (Madill, 1991).

If the distal digit has become necrotic, it should be amputated.

One differential condition which may look similar to toe constriction is fibre entanglement. However, this is not confined to neonates (in fact it is mostly seen in adults) and careful examination will reveal the presence of constricting fibre(s).

## **Prevention**

An increase in nest box humidity appears to be the most beneficial. Some aviculturists use *vasoline* in the feet of newly hatched chicks for the first 3-4 days of life (Clipsham, 1989).

## **References**

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