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## Successful management of egg-bound condition in a pigeon (*Columba livia*): A case report

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### Abstract

Egg binding, also known as the inability of an egg to pass through the oviduct or the lodging of an egg in the cloaca (Crespo and Shivprasad, 2003) is a condition that can be brought on by a number of illnesses including malnutrition, obesity, vitamin deficiencies, calcium metabolic diseases and mechanical damage to the reproductive system (Romagnano, 1996). It is a typical reproductive condition that affects all types and ages of pet birds. Sometimes, mostly as a result of the disorder's cause but also the species, there are no obvious clinical signs to be seen. Signs are more obvious in other situations, such as with cockatiels, finches, lovebirds or canaries. In this case study, a pigeon was presented with egg-bound condition and successfully relieved by diagnostic and clinical approach.

**Keywords:** Egg bound condition, pigeon, x-ray

### Introduction

Egg binding, also known as the inability of an egg to pass through the oviduct or the lodging of an egg in the cloaca (Crespo and Shivprasad, 2003) [2] is a condition that can be brought on by a number of illnesses including malnutrition, obesity, vitamin deficiencies, calcium metabolic diseases and mechanical damage to the reproductive system (Romagnano, 1996) [5]. It is a typical reproductive condition that affects all types and ages of pet birds. Sometimes, mostly as a result of the disorder's cause but also the species, there are no obvious clinical signs to be seen. Signs are more obvious in other situations, such as with cockatiels, finches, lovebirds or canaries.

### Case history, observations and diagnosis

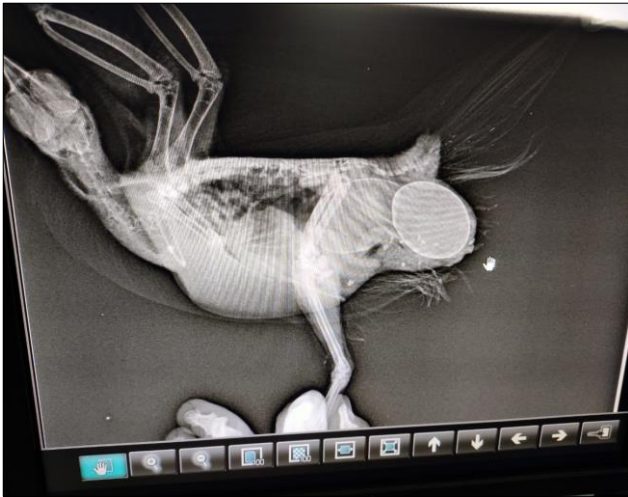
An eighth month old pigeon with a history of weakness, loss of appetite, inability to walk for three days, mild breathing difficulties and a pink mass that began to emerge from the cloaca with severe straining was presented at Veterinary Clinical Complex, College of Veterinary Science, Rajendranagar, PVNRTVU, Hyderabad, India. Upon clinical examination the pigeon was having lameness, droopy wings, enlarged abdomen and weakness. One end of an egg in a pink mass projecting from the cloacal entrance is also visible (Fig. 1).

From history and physical examination (palpation) the pigeon was tentatively diagnosed as an egg-binding state, this egg binding condition was further confirmed by taking X-ray (radiography) lateral abdominal view (Fig. 2) and the image showed, two eggs present in continuity struck in the cloacal region.



**Fig 1:** Pink protruded mass at cloacal opening with one end of egg

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**Fig 2:** Left lateral view (X-Ray findings) showing struck eggs in the cloacal region

### Treatment and Discussion

The bird was stabilized by administering Dexamethasone intramuscularly at a rate of 1 mg/kg body weight and the cloaca was cleaned with normal saline to get rid of the dirt and debris. The cloacal mucosa was applied with 2% Lignocaine gel to desensitize it and permit forceps manipulation. To lubricate the cloaca, liquid paraffin was administered between the egg and cloaca mucosa. Injections of Calcium Sandoz at 0.1 ml I/M and Oxytocin at 0.2 ml I/M were administered; these drugs promote contraction of the reproductive tract and cause the egg to pass. The egg was carefully extracted without being broken by delicate finger manipulation (Fig. 3). After relieving pigeon from egg binding condition, the pigeon received intramuscular injections of 0.1 ml of Enrofloxacin for 3 days and 0.1 ml of Meloxicam for two days. The bird made a smooth recovery with no issues.



**Fig 3:** Unbroken egg removed from terminal part of cloaca by gentle manipulation

According to Charlton (2006)<sup>[1]</sup>, who indicated that egg bound condition was prevalent in young female birds at the beginning stage of the laying period, the egg-bound condition manifested in the present case in an eighth-month-old pigeon. In avian species, egg binding is a medical emergency that, if untreated could endanger the bird's life (Rooskopf, 1996)<sup>[6]</sup>. By the time it was presented, the bird in the current case seemed dull and depressed, suggesting that if the situation was left untreated any longer, it would get worse. In the current case, the precise

etiology causing this illness is unknown. Typically, salpingitis, atony or paralysis of the oviduct muscle or an excessively big egg (Crespo and Shivprasad, 2003)<sup>[2]</sup> are the causes of this illness. Early detection of egg binding is crucial because little birds might pass away from poor circulation and airway pressure within a few hours of becoming egg bound. According to Srinivasan *et al.* (2014)<sup>[8]</sup>, there are a number of causes for egg binding, including heat stress (28.66%), asphyxia (23.23%), hypocalcaemia (17.35%), salpingitis (7.54%), large-sized eggs (6.18%), dehydration (5.73%), vent trauma (5.28%), obesity (3.62%), abnormal ovulation (1.81%) and oviduct neoplasm (0.60%). According to Joy and Divya (2014)<sup>[4]</sup>, little physical manipulation is adequate to correct the issue; in the event of failure, surgery may be used. According to Saif (2008)<sup>[7]</sup>, if the egg-bound condition was left untreated, protrusion of the oviduct was the most frequent problem; however, in the current situation, such issues were not documented.

### Conclusion

This case report highlights the successful treatment of egg binding in an 8<sup>th</sup> month old pigeon. Prompt diagnosis and intervention, including medication administration, cloacal cleaning and careful egg extraction led to the bird's recovery. While the exact cause of egg binding in this case remains unknown, factors such as salpingitis, muscle atony or large eggs are commonly associated with this condition. Further research is needed to better understand the underlying mechanisms and risk factors of egg binding in birds. Early detection and appropriate treatment are crucial to prevent complications and ensure a positive outcome for affected birds.

### Acknowledgement

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