



Uropygialectomy Method Overview



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Introduction

The Uropygialectomy method was taken from the old folk Iraqi heritage and it has evolved over time by a series of scientific researches [1-5]. The method can be summarized by three steps which include the following:

- Removal of feathers which are close to the base of tail and determine the uropygial gland location.
- Surgical removal of the uropygial gland from its base by sharp and sterile blade.
- Precautional cauterization for all areas that are surrounded to the gland by piece of iron heated to a high-temperature degree that is very important to sterilization all this area around the uropygial gland to stop hemorrhages and growth damages the remaining cells of the uropygial gland.

The impact of the total uropygial gland removal on production performance or physiological traits of laying hens, or even in other types of poultry in any country of the world has not been addressed until 2001 [1]. removed uropygial gland in an attempt to treat non-laying hens (sterile hens), after all the previous methods failed to treat them. Sterile hens are representing 5-10% percentage of the total herd. They cause economic losses due to eating fodder in vain as well as other problems. For instance, this chicken always tends to lie (Broodiness), for this reason, it was noted that large numbers of sterile hens presented in the nests. Then, they will crowd out laying hens in the nest, leading to dirty eggs' emergence (eggs outside nests) and the accompanying problems like egg contamination, broken eggs and eat eggs, which are sometimes difficult to overcome. The researcher noted that the uropygial gland of these chickens was overgrown, and it had a twice size gland compared with the normal laying chickens. Furthermore, he noted that this chicken was characterized by small size comb and wattles and as well as noticeable regression of general morphological body measurements. Meanwhile, he has noted after dissecting some of these chickens that the ovary was undeveloped with very small or relic's oviduct. A total of 1200, 6-7 month old, Isa Brown sterile hens were isolated from four poultry farms and subjected to surgical removal of the uropygial

gland (oil gland). After confirming that the rate of egg production for this chicken was zero. The first thing drew attention was the rapid change of the external morphological measurements. After 3 days of the operation, the face redness as well as the comb and wattles' growth were begun and at the end of the first week all the chicken became a bluish face. The researcher noted that the production of eggs has started at the beginning of the second week after the operation. The production rate was 6%, and increases rapidly bringing to 49.8, 89.8 and 93.6 at the weeks 3, 4 and 5, respectively after the operation. Same observations were reported in the local Iraqi chicken [6]. In different flocks of chicken. In the same regard, Al-Mahdawy [7]. Examined the impact of the uropygial gland ablation on production performance traits of broiler chicken herds. He indicated the superiority of most of the treatments than the control group in terms of weight gain and cumulative feed consumption. While, it did not affect the efficiency of feed conversion ratio and total mortality. Moreover, he noted the superiority of treatment groups than the control group in the recipes: body weight, dressing percentage and the percentage of the major parts of the carcass and decreases the percentage of secondary carcass parts compared with the birds of the control group. Processing uropygial gland ablation had a significant effect in improving the qualities of juices and tenderness and public acceptance of meat chicken compared with the control treatment [8]. Studied the effect Uropygialectomy method on some physiological and reproductive traits of broiler breeder males. The researcher noted that uropygial gland eradication had led to a significant increase the red blood cells count, platelet count, packed cells' volume (PCV), hemoglobin concentration and a significant decrease the heterocyte to the lymphocyte ratio. Simultaneously, a significant increase of the total protein, cholesterol, calcium, phosphorus concentrations and ALP enzyme activity in blood plasma. Furthermore, resulted in a significant decrease of uric acid, glucose concentrations and the activity of enzymes GOT and GPT. Furthermore, Al-Daraji et al. [9]. Examined the effects of uropygialectomy at 21 and 28 weeks of age on semen quality of White Leghorn males. Spermatozoa concentration, spermatocrit and percentages of mass activity and individual motility were

increased due to uropygialectomy compared to those of control males (2.62 billion/ml, 10.2%, 91.4%, and 93% versus 2.34 billion/ml, 8.6%, and 86.7% and 88.2%, respectively). In addition, percentage of dead spermatozoa, abnormal spermatozoa and acrosomal abnormalities were decreased in the treated versus control males (11.4 10.6 and 12.4% versus 14.4, 14.7 and 16.2 %, respectively). Results suggest that uropygialectomy of White Leghorn males, regardless of the age at uropygialectomy in this experiment, can be beneficial to semen quality [10].

This review gives the first evidence that the uropygialectomy through surgical removal could act to improve the productivity of poultry, probably by prevention concentration of the essential biological stuffs inside the gland. Therefore, these important stuffs will come back to the blood circulation and will utilize it actively. Lastly, the uropygialectomy could be considered as a mean of curing sterile birds and increment body weight, and thus, an indicator of a poultry vitality. These observations, as a whole, suggest this uropygialectomy is a functional process, involved in the modulation of several biophysiological mechanisms of productivity adaptation in poultry.

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