

## عنوان مقاله:

Histopathological Evaluation of the Effect of Metronidazole on the Embryo Skin and Integument Tissues using a Chicken Embryo Model

## محل انتشار:

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## خلاصه مقاله:

Background: Metronidazole is categorized in pharmacological group C and few researches have been conducted about its pathological effects on the human fetus. Since the embryogenesis in chicken is similar to that in human beings, in the current study, the toxic effects of this drug on embryo skin and integument tissues were assessed using a chicken embryo model. Method: The experiment was done on ۳۶ fertilized Ross ۳۰۸ eggs with the mean egg-weight of  $(54.4 \pm 0.8g)$ . The embryos of the control group received sterile phosphate buffered saline solution into the yolk sac on day ۴ of the growing period. The embryos of the two treatment groups received metronidazole at dosages of ۵۰ and ۱۰۰ mg per Kg body-weight, respectively. The pathological effects of the drug on the embryos' skin and integument tissues were evaluated using macroscopic and histopathologic studies. Results: According to the results, metronidazole has adverse effects on the embryo skin and integument tissues during embryonic development. Macroscopic evaluation of the organs revealed white nodules, of about ۱mm in diameter, on the skin surface of the embryos. Histopathological effects of the drug consisted of hyperkeratosis, degeneration of the integument tissues and detachment from the epidermis. Conclusion: Based on the obtained results, it is concluded that consumption of metronidazole during pregnancy can cause adverse effects on the skin and integument tissues of the human fetus. Therefore, the drug should only be given during pregnancy when benefits outweigh its risks

## کلمات کلیدی:

skin, Fetus, Histopathologic, Chicken, Metronidazole

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