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Document Title : *A histological study of the protective effect of zinecard against cardiotoxicity induced by adriamycin in albino rats*
دراسة نسيجية للتأثير الوقائي للزنيكارد ضد الادرياميسين المسبب لسمية القلب في الجرذان

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Abstract : Adriamycin (ADR), one of anthracyclin group, is an important anticancer drug widely used in the treatment of many human tumours including solid tumours and Haematological malignancies. However, treatment with this agent is limited by a potentially lethal and dose dependant congestive cardiomyopathy. Acute toxicity can occur on treatment or arising within weeks or months of finishing treatment this may present with heart failure due to dilating cardiomyopathy, abnormalities of cardiac rhythm or sudden death. Antioxidant plays a major role in decreasing the toxicity of anthracyclin. Zinecard is considered to be one of the antioxidant drugs which take part in stopping or diminishing adriamycin toxicity on the hearts muscle. As a result to the applied studies of the zinecard protectional effect against adriamycin on experimental white lab rats; single doses of the drugs were injected after dividing them into:- Control group (6 rats), Adriamycin group DOX (6 rats), Zinecard and Adriamycin group DXZ+DOX (6 rats). Tissues changes on the myocardial were noticed when staining sections with Haemtoxylin and Eosin. As staining the section with Mallory Triple stain an enormous increasment of collagen fibers observed between myocytes. A clear blood congestion, loss and disorganization of myofibrils, vacuolization of cytoplasm in some myocytes while other show strongly acidophilia. Interstitial spaces between muscle fibers are wide and nuclear abnormalities occurred. These changes increase with time. However, simple changes are shown in the histopathological result with using both zinecard and adriamycin drugs, which point to zinecard tremendous role in decreasing the toxicity of adriamycin.

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