## Dedication

To:

My mother.

The soul of my father.

My brothers and sisters.

My sons and daughters.

All friends and colleagues.

I dedicate this work with love and affection.

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## Abstract

This study was designed to determine the prevalence rate of Brucellosis and to identify the risk factors for Brucella infection in camels intended for export from Kassala State. A total of 400 blood samples were collected for serum from all Kassala localities, tested using Rose Bengal Plate test (RBPT) and Indirect Enzyme Linked Immuno sorbent Assay (I.ELISA). The prevalence rate was (29.5 %) and (27.8%) based on the results of RBPT and iELISA respectively. According to sex, the prevalence rate of the disease was (30.4%) out of 335 in males and (24.6%) out of 65 in females. There were no clinical signs of camel's Brucellosis in all tested animals. The prevalence of the disease was (14.4%) in Rural Khashm Elgerba, (15.3%) in North Delta, (8.5%) in Wad Elhilau, Rural Kassala (11.9%), Hamashkoreb (12.7%), Rustic Arouma (14.4%), Talkook (16.9%) and Atbra river locality (5.9%) with a significant statistical difference. Herds with more than 20 camels were more frequently affected. In this study the Seroprevalence of *Brucella* was (9.3 %) in young (1-2 years) and (23.7%) in adult camels (above 5 years). The results of the present study provide the status of seropositivity to *Brucella* in camels intended for export in Kassala State and the risk factors that contribute to prevalence of Brucellosis among camels. This situation requires more attention and effort to implement procedures and regulation to control the disease in the study area.

## المستخلص

هدفت هذه الدراسة إلى تحديد نسبة إنتشار مرض البروسيلا فى الإبل المعدة للصادر فى المحجر البيطرى بولاية كسلا، بالاضافة لتحديد العوامل المساعدة على إنتشار المرض.

تم جمع عدد ٤٠٠ عينة من الدم من المحليات المختلفة لإستخلاص المصل حيث تم إختبارها بإستخدام إختبار الروز بنغال وإختبار الإليزا غير المباشر للكشف عن الاجسام المضادة للبروسيلا. وقد كانت نسبة الاصابة (29.5%) عند إستخدام الروز بنغال، (27.8%) عند إستخدام إختبار الإليزا غير المباشر. وقد كانت نسبة الإصابة فى الذكوز (30.4%) بينما كانت (24.6%) فى الإناث مع عدم وجود علامات إكلينيكية للمرض فى الحيوانات التى تم فحصها. نسية إنتشار المرض فى محلية ريفى خشم القربة (14.4%)، شمال الدلتا (15.3%)، محلية ود الحليو (8.5%)، ريفى كسلا (11.9%)، محلية همشكوريب (12.7%)، ريفى أروما (14.4%)، محلية تلكوك (16.9%)، محلية نهر عطبرة (5.9%). نسبة إنتشار المرض فى الإبل عمر ١-٢ سنة (3.9%) بينما كانت (23.7%) فى الإبل عمر ٥ سنوات فما فوق. أظهرت نتائج هذه الدراسة حالة الإصابة بمرض البروسيلا فى الجمال المعدة للصادربالإضافة الى العوامل التى تسهم فى إنتشار المرض. بناءا على ذلك هنالك حوجة للمزيد من الإهتمام والجهود لتنفيذ الوسائل المختلفة والتنظيم لمكافحة المرض فى ولاية كسلا.