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Dedication

I dedicate the work to my mother, father, wife, brothers, sisters, colleagues, and friends specially my best friends Abd Elrahman Sheikh Eldeen and Hamza Elshafee Adam.

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Abstract

A cross sectional study was conducted during January to April 2015 to estimate the prevalence of bovine cysticercosis in cattle slaughtered at Elsahafa slaughterhouse in Khartoum state, Sudan.

The objectives were to determine the prevalence of bovine cysticercosis and associated potential risk factors, cyst viability and cyst distribution in different body tissues. The slaughterhouse survey was carried out by routine inspection of carcasses and viability test methods. Post mortem examination of 283 slaughtered cattle were examined from randomly selected animals which 3 (1.1%) were infected with *T. saginata* metacestodes. A total of 16 *Cysticercus bovis* collected during the inspection, 4 (25%) were found to be viable while others 12(75%) were degenerative cysts. Liver only was the main predilection site of the cysts and no cysts detected in other inspected organs.

A univariate analysis was performed using the Chi-square as a test of significance (significance level ≤0.25) for the association between the bovine cysticercosis and the potential risk factors. Four of these potential risk factors were showed significant association to *Cysticercus bovis* infection which were sex (p-value = 0.158), age (p-value = 0.000), body condition (p-value = 0.003) and source of animal (p-value = 0.000).

A logistic regression was performed to the results of the univeriate analysis using the Odds ratio and Chi-square tests as tests of significance association between the four significant potential risk factors and *cysticercus bovis* infection, but no one of these factors were showed to be of significant association to bovine cysticercosis at the end.

ملخص البحث

أجريت دراسة استقطاعية في الفترة ما بين يناير الى أبريل ٢٠١٥؛ وذلك لتحديد نسبة الإصابة بمرض الأكياس البقرية في الأبقار بمسلخ الصحافة الواقع في ولاية الخرطوم عاصمة السودان.

وتهدف الدراسة الى تحديد نسبة الإصابة بمرض الأكياس البقرية، وعوامل الخطر المتعلقة بهذا المرض، الأكياس الحية ونسبة انتشارها في أنسجة الجسم المختلفة. تم عمل مسح للحيوانات المذبوحة في المسلخ بإجراء الاختبارات الروتينية لفحص الذبيح، فبعد الذبح تم فحص ٢٨٣ من الأبقار التي تم اختيارها بصورة عشوائية فوجد ان ثلاث أبقار منها كانت مصابة وبلغت نسبة الإصابة العامة بمرض الأكياس البقرية (١,١%)

تم جمع وفحص ١٦ من الأكياس البقرية، فوجد ان ٤ أكياس منها كانت حية، وذلك يمثل نسبة (٢٥%) من العدد الكلي للأكياس. بينما كانت باقي الأكياس ميتة وعددها ١٢كيس بنسبة (٧٥%). أثبتت الدراسة أن الكبد هو العضو الوحيد الذي يمثل المكان المفضل لوجود الأكياس البقرية ولم توجد اي اكياس في باقي الأعضاء التي تم فحصها.

تم تحليل البيانات بالتحليل أحادي العوامل باستخدام مربع كاي؛ لتحليل ما إذا كانت هنالك علاقة معنوية ما بين عوامل الخطر وحدوث مرض الأكياس البقرية. حيث أظهرت الدراسة أن هنالك أربعة من عوامل الخطر لها علاقة معنوية بحدوث مرض الأكياس البقرية وهي : نوع الحيوان (P-value=0.158) ، عمر الحيوان (P-value=0.000) ، حالة جسم الحيوان (P-value=0.003) ، مصدر الحيوان (P-value=0.000) .

عوامل الخطر التي كانت لها علاقة معنوية بحدوث مرض الأكياس البقرية كنتاج للتحليل أحادي العوامل تم إدخالها للتحليل باستخدام الانحدار المنطقي الذي تم باختبار مربع كأي واختبار نسبة الأضداد فلم يظهر أي من عوامل الخطر ذو صلة بحدوث مرض الأكياس البقرية في الأبقار.