

Acknowledgement

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Dedication

- **To my father and my mother**
- **To my brothers and sisters**
- **To my colleagues and friends**
- **To all who have helped me**

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Abstract

Abattoir survey was conducted on 256 camels slaughtered at Tambul slaughter house in Butana Area- Sudan, during the period which extended from April to July 2013. The objective was to estimate the prevalence of hydatid cysts in camel and to investigate risk factors associated with the disease. Routine meat inspection procedure was employed to detect the presence of hydatid cyst in visceral organs (lung, liver, heart and spleen). Selected camels originated from eight localities: Darfour, Kurdofan, Kassala, Butana, Gadarif, Sennar, White Nile and Managil.

The overall prevalence was 8.6% . The prevalence of hydatid cysts infection according to age of camels was 16.3% in animals more than ten years, 7.8% in animals from five to ten years and 2.4% in animals less than five years. The distribution of the hydatid cysts according to the area (source) of camel was 9.2% in Darfour, 4.2% in Kurdofan, zero% in Kassala, 9% in Butana, 4% in Gadarif , 100% in Sennar, 0% in White Nile and zero% in Mangil. Regarding body condition the prevalence of

hydatidosis was 8.7% in good body condition animals and 8.4% in poor body condition. Regarding distribution by sex, the prevalence of hydatid cysts was 3.8% in male and 10.1% in female. The prevalence of hydatidosis in breed of animals was 9.2% in Rezegat breed , 17.6% in Kabashi breed , 6.5% in Shokri breed , 11.7% in Ruffae breed , zero% in Bne-aamer breed and zero% in Kuahla breed.

The results of the univariate analysis, using the Chi-square showed significant (less than or equal 0.25) association between the prevalence of hydatidosis and the following risk factors : sex of animal (P-value = 0.104), age of animal (p-value = 0.054), body and management (P-value = 0.092).

Using multivariate analysis to determine the association between hydatidosis and potential risk factors, sex, no risk factors were found significantly (≤ 0.05) associated with hydatidosis .

Our study showed that the lung was the most infected organ 95.5% followed by the liver and lung 4.5%. No cyst was found in heart, spleen, kidneys and peritoneum . Microscopic examination of the 41 cysts showed that 20 cysts were fertile and viable, 7 cysts were fertile but nonviable and 14 cysts were sterile.

ملخص البحث

أجرى البحث على 256 حيوان مذبوحاً في مسلخ تمبول بمنطقة البطانة ، السودان . خلال الفترة التي إمتدت من ابريل إلى يوليو 2013 ، كان الهدف هو تقدير معدل إنتشار مرض الأكياس العدارية في الجمال والتحقيق من عوامل الخطر المرتبطة بهذا المرض . أجرى التفتيش الروتيني للحوم للكشف عن وجود الأكياس العدارية في الأحشاء الداخلية .

كان مصدر الماشية المختارة من ثماني مناطق وهي دارفور وكردفان وكسلا والبطانة والقضارف وسنار والنيل الابيض والمناقل. كان معدل إنتشار المرض في كل الحيوانات 8.6%. كان معدل إنتشار عدوى الأكياس العدارية وفقاً لسن الإبل 16.3% في الحيوانات التي عمرها أكبر من 10 سنوات و 7.8% في الحيوانات التي عمرها من 5-10 سنوات و 2.4% في الحيوانات التي عمرها اقل من 5 سنوات . وكان معدل إنتشار الأكياس وفقاً للمناطق التي جاءت منها الحيوانات : 9.2% دارفور و 4.2% كردفان و 9% البطانة و 4% القضارف و 0% كسلا و 100% سنار و 0% النيل الأبيض و 0% المناقل.. أما بالنسبة لحالة الجسم كان معدل إنتشار المرض هو 8.7% في حالة الجسم الجيد 4.8% في حالة الجسم الهزيل . وكان معدل إنتشار الأكياس العدارية حسب الجنس هو 3.8% في الذكور و 10.3% في الإناث . وكان معدل إنتشار الأكياس العدارية حسب السلالة هو 9.2% في الرزيقات ، 17.6% في الكباشي و 6.5% في الشكري، 11.7% في الرفاعي و 0% في البني عامر و 0% في الكواهلة .

نتائج التحليل الأوحى باستخدام مربع كاي اظهرت(أقل من أويساوي 0.25) ان هناك علاقة معنوية بين معدل الإصابة بالأكياس العدارية وعوامل الخطر الأتية: جنس الحيوان (0.104=القيمة) ، وعمر الحيوان (0.054% القيمة) ونظام التربية (0.09=القيمة) ومصدر الحيوان (0.435القيمة) والسلالة (0.51القيمة) ووجد ان الجنس والعمر ونظام التربية كانت لهم علاقة معنوية بإنتشار المرض . وعندما تم تحليلهم بواسطة التحليل المتعدد لمعرفة درجة الإرتباط وجد ان الجنس (0.104=القيمة) وعمر الحيوان (0.054% القيمة) ونظام التربية (0.09=القيمة) لم تكن لهم علاقة معنوية بالمرض تحت القيمة (0.05) . وأظهرت الدراسة أن الرئة هي العضو الأكثر إصابة بالأكياس العدارية 95.5% متبوعة بالإصابة في الرئة والكبد معا 4.5% ولاتوجد اكياس في كل من القلب والطحال والكلاوي والبريتون. الفحص المجهرى للأكياس اظهر أن

هناك 20 كيسا خصبة وحيوية ، 7 اكياس خصبة ولكن غيرحيوية و 14 كيس عقيما.