



## Diagnosis of *Brucellaovis* in ram infected with orchitis

Farhan AlaAllah Eabaid  
Biology Department - College of Science  
Al-Muthana University

### Abstract

*Brucellaovis* infect ram and cause epididymitis and infertility. The present study aimed to isolate *brucellaovis* from testes of ram, 100 testes samples were collected then withdraw sample from epididymis after that stained with modified ziehlneelsen, samples were positive for stain were cultured on *brucella* selective media. The Results showed that 13 samples where positive for modified ziehlneelsen and 10 samples were positive for culture.

### Introduction

*Brucellaovis* the causative agent of contagious epididymitis of rams. It produces a clinical or subclinical disease in sheep that is characterised by genital lesions in rams and the main consequence of the disease is reduced fertility. The disease is world-wide distributed and in Europe has been reported in France, Germany, Hungary, Romania, Russia, the Slovak Republic, Spain, but probably occurs in most sheep-raising countries (1). Presumptive evidence of *Brucella* is provided by the demonstration, by modified acid-fast staining of organisms, of *Brucella* morphology in abortion material or vaginal discharge, especially if supported by serological tests(2). The polymerase chain reaction

methods provide additional means of detection. Whenever possible, *Brucella* spp. should be isolated using plain or selective media by culture from uterine discharges, aborted fetuses, udder secretions or selected tissues, such as lymph nodes and male and female reproductive organs. Species and biovars should be identified by phage lysis, and by cultural, biochemical and serological criteria, Polymerase chain reaction (PCR) can provide both a complementary and biotyping method based on specific genomic sequences(3). The existence of clinical lesions (unilateral or, occasionally, bilateral epididymitis) in rams may be indicative of the existence of infection (4).

### Materials and Methods

A total of 100 suspected brucellosis testes samples were obtained from ram carcasses with signs of orchitis were collected from

Al-Samawa slaughter houses. The fluids were withdraw directly from epididymis with sterile syringe and

stained with modified ziehlneelsen and then cultured directly on brucella selective media

then certified brucella growth with biochemical tests and monospecific antisera according to Alton(5).

## Results

Results showed that 13 (12%) samples were positive for modified ziehlneelsen stain, *Brucella* organisms first recognized in smears obtained from epididymis stained with modified ziehlneelsen stain, which appeared red clumps against a blue background, from results that showed 10 isolates were obtained from epididymis, *Brucella* recognized on the basis of colonial

morphology which appeared round translucent pale honey color on *Brucella* selective media (Fig.2), and results of biochemical test were positive for catalase negative for oxidase, nitrate reduction, H<sub>2</sub>S production, urease, MR-VP, gelatinase, Citrate utilization and indol production (Fig.2), all isolates were agglutinate with monospecific antisera for *b. ovis*

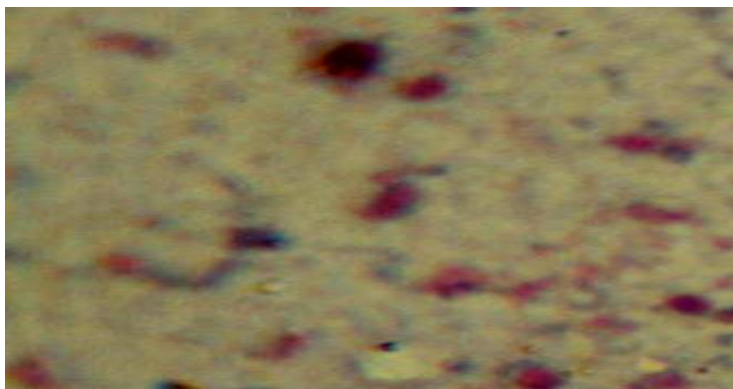


Fig.1. Microscopic examination using modified ziehlneelsen stain for epididymis samples

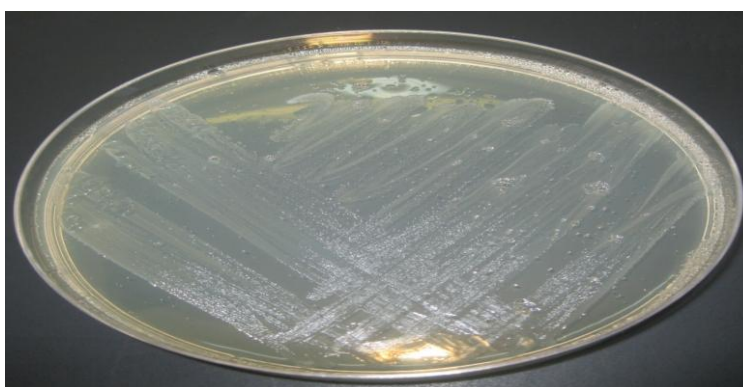


Fig. 2. Brucella colonies on *Brucella* selective media

## Discussion

From results showed that 13 samples were positive for MZN this results same with that reported by OIE, (6), *Brucella* are not truly acid-

fast, but are resistant to decolorisation by weak acids and thus stain red by the Stamp's modification of the Ziehl-Neelsen's method.

This is the usual procedure for the examination of smears of organs or biological fluids that have been previously fixed with heat or ethanol, and by this method, *Brucella* organisms stain red against a blue background. Only 10 samples

Brucellosis is a disease of many animal species but especially of those that produce food :sheep (especially milk-producing), goats, cattle and pigs and on a more localized scale, camels, buffaloes, yaks and reindeer. Also infected Elk, insects, ticks, cetaceans (Baba *et al.*, 1998; Rhee *et al.*, 1998; Sarker *et al.*, 1998).

In animals where the infection is not restricted the bacteria become distributed and ultimately localized in the spleen and liver (Cheers, 1984). The organisms show

were positive for culture and all isolates were *Brucella ovis*, this same that mentioned by (7) who said that the causative agent of epididymitis, have been identified, *B. ovis* is most frequently isolated from ram.

a marked tropism for the placenta of the pregnant animals probably due to the presence of the compound erythritol. There are two main causes for spontaneous abortion in animals. The first is due to erythritol, which can promote infections in the fetus and placenta. The second is due to the lack of anti-*Brucella* activity in the amniotic fluid. Males can also harbor the bacteria in their reproductive (Smith *et al.*, 1961; Pearce *et al.*, 1962; Keppie *et al.*, 1965).

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### تشخيص *Brucella abortus* البروسيلة الضائية في الاكباش المصابة بالتهاب الخصى

فرحان على الله عبيد  
كلية العلوم / جامعة المثني

المستخلص

البروسيلة الضائية تصيب الاكباش وتسبب التهاب البربخ والعقم والدراسة الحالية تهدف لعزل البروسيلة الضائية من خصى الكباش حيث جمعت (100) عينة وذلك بسحب السوائل من البربخ وصبغت بواسطة صبغة زيل- نيلسن المحورة ثم زرعت على اوساط زرع خاصة، اظهرت النتائج بان (13) عينة كانت موجبة بصبغة زيل- نيلسن المحورة و(15) عينة كانت موجبة للزرع البكتيري.