

1 **Evaluation of the treatment of septic arthritis by arthrotomy in calves**

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5 The objectives of this study are to evaluate the effectiveness of the treatment of
6 chronic septic arthritis of the tarsus, stifle or elbow joints by arthrotomy in calves.

7 This study included 29 Belgian blue calves suffering from chronic septic arthritis
8 (CSA) of the elbow, the stifle or the tarsus referred to the Clinic for ruminants of Liege. For
9 the arthrotomy, after an induction (xylazine), an intravenous general anaesthesia (triple drip)
10 was used associated with a high epidural anaesthesia for the fore limbs. A single incision on
11 the lateral side of the joint was performed except for the tarsal joint where a second incision
12 on the medial side was also performed. The joint capsule and the cartilage were curetted.
13 The joint was flushed with 2 l of chlorhexidine diluted solution. The incision was sutured
14 except for the tarsus. Penicillin (20.000 UI/kg, IM, SID for 15 days), gentamicine (6 mg/kg, IV,
15 SID for 5 days), flunixin (2.2 mg/kg, IV, SID) and cefalexine (5 ml, SID, intra-articular) were
16 administered. Telephone follow up 3 months after surgery was performed.

17 All the calves had been previously treated for 13 ± 10 days with antibiotics and anti-
18 inflammatory drugs in farm, without success. Thirteen tarsal septic arthritis including 10 with
19 signs of osteomyelitis, 11 of the stifle including 6 with osteomyelitis and 5 of the elbow
20 including 3 with osteomyelitis were diagnosed. Eight calves suffering from tarsal CSA were
21 treated by arthrotomy and 5 had a good surgical outcome. Five calves were euthanatized for
22 economic reasons. Seven calves suffering from CSA of the stifle were treated by arthrotomy
23 and the others were treated medically. Four had a good surgical outcome. Two calves
24 suffering from CSA of the elbow were treated surgically with success, 1 was euthanatized
25 and 2 were treated medically.

26 CSA in calves represents 25.2 % of the consultations for lameness in cattle. CSA of
27 the stifle, elbow and tarsus represent 31 % of all the cases of arthritis. Eleven of the 17 (65
28 %) treated calves had a good surgical outcome. These animals were fattened or used for
29 breeding. Arthrodesis being unrealizable on these joints, the arthrotomy seems to be a
30 reasonable option for calves suffering from CSA when medical treatment and joint lavage
31 were ineffective and given the poor prognosis of the disease.

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33 Key words: calves, arthritis, arthrotomy, lameness