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| **Reference** | **Age** | **Sex** | **Country of exposure** | **Traveller** | **Occupation** | **Prosthetic implant** | **Time since implantation (months)** | **Brucella SAT titre** | **Radiographic changes** | **Blood cultures positive** | **Joint aspirate culture positive** | **Species** | **Antibiotics used** | **Antibiotic course length****(weeks)** | **Surgical management** | **Follow up (months)** | **Outcome** |
| Jones et al 1983[4] | 54 | M | USA | No | Dairy farmer | R THR | 6 | 640 | No loosening | No | No | *B. abortus* | Tetracycline 500mg QID Streptomycin 500mg BID | 6 - failed therapy; followed by 52 weeks; Streptomycin first 6 only | One stage revision once medical treatment failed | 24 | Asymptomatic |
| Agarwal et al 1991[5] | 24 | F | Saudi Arabia | No | NR | Bilateral TKR | 2 | 2560 | No loosening | No | Yes | *B. melitensis* | Rifampicin 300mg BID Co-trimoxazole 980mg BID | 76 | None | 19 | Pain free, flexion 0-90 |
| Orti et al 1997[6] | 60 | M | Spain | No | "Works with goats" | R TKR | 14 | 160 | No loosening | No | Yes | *B. melitensis* | Doxycycline 100mg BID Rifampicin 900mg QD Streptomycin 1g QD | 6Streptomycin first 3 only | None | 8 | Symptom free |
| Navarro et al 1997[7] | 54 | M | Spain | No | Shepherd | L internal fixation of femur | 324 | 160 | Loosening | No | NR | *B. melitensis* | Doxycycline 100mg BID Gentamicin 240mg QD | 34Gentamicin first 1 only | Removal of implant and debridement | 18 | Asymptomatic |
| Malizos et al 1997[8] | 74 | M | Greece | No | Shepherd | Bilateral TKR | 5 | 160 | No loosening | Yes | Yes | *B. melitensis* | DoxycyclineStreptomycin Co-trimoxazole | 20Streptomycin first 3 only | None | 24 | Asymptomatic |
| Ortega et al 2002[9] | 63 |  | Spain | No | Cattle owner | R THR | 60 | NR | Loosening | No | NR | *B. melitensis* | Doxycycline 100mg BID Rifampicin 900mg QD Streptomycin 1g QD | 12 Streptomycin first 3 only | Two-stage revision | 6 | "Satisfactory" |
| Weil et al 2003[10] | 38 | M | Israel | No | Artist | L THR | 48 | 1600 | Loosening | NR | No | *B. melitensis* | Doxycycline 200mg QD Rifampicin 600mg QD | 126 prior to surgery, 6 after | Two-stage revision | 12 | Asymptomatic |
| Weil et al 2003[10] | 61 | M | Israel | No | Retired | R TKR | 60 | 1600 | Loosening | NR | No | *B. melitensis* | Doxycycline 200mg QD Rifampicin 600mg QD | 126 prior to surgery, 6 after | Two-stage revision | 12 | Free of joint pain |
| Weil et al 2003[10] | 67 | M | Israel | No | Retired | L TKR | 168 | 1600 | Loosening | NR | Yes | *B. melitensis* | Doxycycline 200mg QD Rifampicin 600mg QD | 126 prior to surgery, 6 after | Two-stage revision | 12 | Free of joint pain |
| Kasim et al 2004[11] | 47 | F | Lebanon | No | NR | L THR | 168 | 640 | Loosening | NR | NR | *Brucella* spp. | Doxycycline 100mg BID Rifampicin 600mg QD | 20 | One-stage revision | 48 | Symptom free, negative *Brucella* titres |
| Cairo et al 2006[12] | 50 | M | Spain | No | NR | L THR | 0 | 320 | No loosening | Yes | NR | *B. melitensis* | Doxycycline 100mg BID Streptomycin 1g QD | 104 Streptomycin first 2 only | None | 60 | Well, negative *Brucella* titres |
| Cairo et al 2006[12] | 71 | M | Spain | No | Farmer | R THR | 36 | NR | Loosening | No | NR | *B. melitensis* | Doxycycline 100mg BID Rifampicin 600mg QD Streptomycin 750mg QD | 24 Streptomycin first week only | Initially one stage revision (infection not suspected); later revision THR after failure of medical therapy | 36 | Well, negative *Brucella* titres |
| Cairo et al 2006[12] | 74 | F | Spain | No | NR | L tibial plate | 180 | 80 | NR | NR | NR | *B. melitensis* | Doxycycline 100mg BID Rifampicin 300mg TID Streptomycin 1g QD | 32 Doxycycline/streptomycin first week Doxycycline/rifampicin for remainder | Initially bone graft and medical therapy - failed - then two stage revision | 36 | Satisfactory range of movement 0-100 degrees knee |
| Ruiz-Iban et al 2006[13] | 66 | F | Spain | No | Housewife | THR | 36 | NR | Loosening | NR | Yes | *B. abortus* | Doxycycline 200mg QD Rifampicin 900mg QD | 6 | Two-stage revision | 66 | Asymptomatic |
| Ruiz-Iban et al 2006[13] | 71 | M | Spain | No | Agricultural worker | THR | 28 | 640 | No loosening | NR | No | *B. melitensis* | Doxycycline 200mg QD Rifampicin 900mg QD Streptomycin 200mg QD | 24 Streptomycin first 6 only | Debridement | 60 | Asymptomatic |
| Marbach et al 2007[14] | 67 | NR | Sicily | Yes | NR | Bilateral TKR | 48 | NR | Loosening | NR | NR | *Brucella* spp. | Doxycycline 100mg BID Rifampicin 450mg BID | 12 | Two-stage revision | 15 | Good range of movement |
| Tena et al 2007[15] | 56 | M | Spain | No | Farmer | L THR | 60 | 80 | Loosening | No | Yes | *B. melitensis* | Doxycycline 100mg BID Rifampicin 900mg QD Streptomycin 1g QD | 8 Doxycycline/streptomycin first 2 weeks Doxycycline/rifampicin for remainder | Two-stage revision | 60 | Asymptomatic, good joint function |
| Tassinari et al 2008[16] | 68 | M | Italy | No | NR | R TKR | 24 | 800 | No loosening | NR | Yes | *B. melitensis* | Doxycycline 100mg BID Rifampicin 250mg QD | 8 | None | 12 | Pain disappeared, no radiographic changes |
| Dauty et al 2009[17] | 65 | F | Portugal | Yes | NR | Bilateral TKR | NR | NR | Loosening | NR | NR | *B. melitensis* | Doxycycline 200mg QD Rifampicin 900mg QD | 12 | Two-stage revision | 120 | Pain free, walking distance > 1km |
| Erdogan et al 2010[18] | 63 | F | Turkey | No | NR | R TKR | 24 | 160 | NR | NR | NR | *B. melitensis* | Doxycycline 200mg QD Rifampicin 600mg QD | 20 Initially 6 weeks, followed by revision TKR, then 16 weeks | One-stage revision | 36 | Free of joint pain, negative serology |
| Nichols et al 2014[19] | 67 | F | Mexico | No | NR | THR | 24 | NR | Loosening | NR | NR | *B. abortus* | DoxycyclineRifampicin | 12 | Two-stage revision |  | No evidence of infection recurrence |
| Lowe et al 2015[20] | NR | NR | India | Yes | NR | THR | NR | NR | NR | NR | Yes | *B. melitensis* | None – lost to follow up | N/a | None | 0 | Unknown |
| Carothers et al 2015[21] | 67 | F | USA or Mexico | No | NR | R THR | 24 | NR | Loosening | NR | NR | *B. abortus* | Doxycycline 100mg BID Rifampicin 300mg BID | 20 | Two-stage revision | 24 | Well, no evidence of infection |
| Present case | 51 | M | Thailand | Yes | Company director | L TKR | 60 | >2560 | No loosening | Yes | Yes | *B. melitensis* | Doxycycline 200mg QD Rifampicin 600mg QDGentamicin 400mg QD | 24 Gentamicin first 2 weeks only | None | 12 | Well, pain free, fully mobile, no radiographic changes |

Table 1: Summary of 24 patients with *Brucella* spp. prosthetic joint infection. M = male, F= female, L = left, R = right, NR = not reported, SAT = Standard agglutination test, QD = quaque die [once daily], BID = bis in die [twice daily], TID = ter in die [thrice daily], QID = quater in die [four times daily], THR = total hip replacement, TKR = total knee replacement. Where dose and/or dosing interval are given in original report, they are reproduced here.